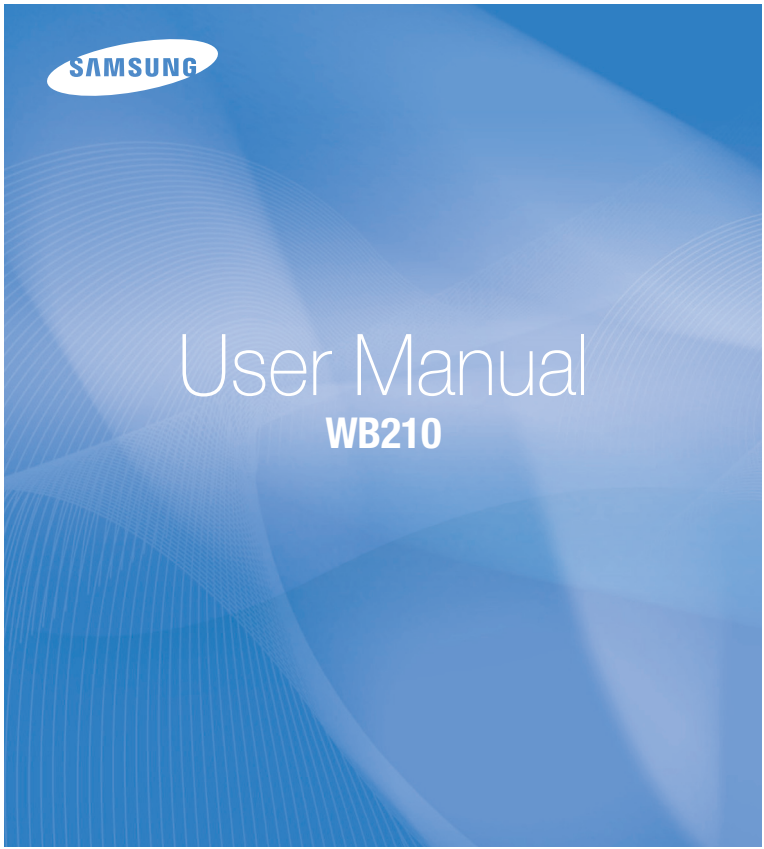

This user manual includes detailed usage instructions for your camera. Please read this manual thoroughly.

Click a topic

Basic troubleshooting
Quick reference
Contents
Basic functions
Extended functions
Shooting options
Playback/Editing
Settings
Appendixes
Index

Health and safety information

Always comply with the following precautions and usage tips to avoid dangerous situations and ensure peak performance of your camera.

Warning—situations that could cause injury to yourself or others

Do not disassemble or attempt to repair your camera.
This may result in electric shock or damage to the camera.

Do not use your camera near flammable or explosive gases and liquids.
This may cause a fire or explosion.

Do not insert flammable materials into the camera or store these materials near the camera.
This may cause a fire or electric shock.

Do not handle your camera with wet hands.
This may result in electric shock.

Prevent damage to subjects' eyesight.
Do not use the flash in close proximity (closer than 1 m/3 ft) to people or animals. If you use the flash too close to your subject's eyes, it can cause temporary or permanent eyesight damage.

Keep your camera away from small children and pets.
Keep your camera and all accessories out of the reach of small children and animals. Small parts may cause choking or serious injury if swallowed. Moving parts and accessories may present physical dangers as well.

Do not expose the camera to direct sunlight or high temperatures for an extended period of time.
Prolonged exposure to sunlight or extreme temperatures can cause permanent damage to your camera's internal components.

Avoid covering the camera or charger with blankets or clothes.
The camera may overheat, which may distort the camera or cause a fire.

If liquid or foreign objects enter your camera, immediately disconnect all power sources, such as the battery or charger, and then contact a Samsung service center.

Caution—situations that could cause damage to your camera or other equipment

Remove the batteries from your camera when storing it for an extended period of time.
Installed batteries may leak or corrode over time and cause serious damage to your camera.

Use only authentic, manufacturer-recommended, Lithium-ion replacement batteries. Do not damage or heat the battery.
Inauthentic, damaged, or heated batteries may cause a fire or personal injury.

Use only Samsung-approved batteries, chargers, cables and accessories.
- Using unauthorized batteries, chargers, cables or accessories can cause batteries to explode, damage your camera, or cause injury.
- Samsung is not responsible for damage or injuries caused by unauthorized batteries, chargers, cables or accessories.

Use the battery only for its intended purpose.
Misusing the battery may cause a fire or electric shock.

Do not touch the flash while it fires.
The flash is very hot when fired and may burn your skin.

When you use AC charger, turn off the camera before you disconnect the power to the AC charger.
Failing to do so may result in fire or electric shock.

Disconnect the charger from the wall socket when not in use.
Failing to do so may result in fire or electric shock.

Do not use a damaged power supply cord, plug, or loose outlet when you charge batteries.
These may cause a fire or electric shock.

Do not allow the AC charger to come in contact with the +/- terminals on the battery.
This may cause a fire or electric shock.

Do not force the camera's parts or apply pressure to the camera.
This may cause your camera to malfunction.

Exercise caution when you connect cables or adapters and install batteries and memory cards.

If you force the connectors, improperly connect cables, or improperly install batteries and memory cards, you can damage ports, connectors, and accessories.

Keep cards with magnetic strips away from the camera case.

Information stored on the card may be damaged or erased.

Never use a damaged charger, battery, or memory card.

This may result in electric shock or camera malfunction or cause a fire.

Check that the camera is operating properly before use.

The manufacturer takes no responsibility for any loss of files or damage that may result from camera malfunction or improper use.

You must plug the end of the USB cable with the indicator light (▲) into your camera.

If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.

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- For Open Source License information, refer to the 'OpenSourceInfo.pdf' in the provided CD-ROM.

Outline of the User Manual

Basic functions 12

Learn about your camera's layout, icons, and basic functions for shooting.

Extended functions 33

Learn how to capture a photo, record a video, and record a voice memo by selecting a mode.

Shooting options 49

Learn how to set the options in Shooting mode.

Playback/Editing 76

Learn how to play back photos, videos, or voice memos and edit photos or videos. Also, learn how to connect your camera to your computer, photo printer, TV, or HDTV.

Settings 103

Refer to options to configure your camera's settings.

Appendixes 110

Get information about error messages, specifications, and maintenance.

Icons used in this manual

Icon	Function
	Additional information
	Safety warnings and precautions
[ ]	Camera buttons. For example, [**Shutter**] represents the shutter button.
( )	Page number of related information
→	The order of options or menus you must select to perform a step, for example: Touch MENU → **Photo Size** (represents Touch MENU, and then touch **Photo Size**).
*	Annotation

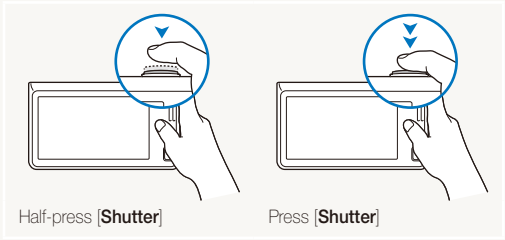
Abbreviations used in this manual

Abbreviation	Definition
ACB	Auto Contrast Balance
AEB	Auto Exposure Bracket
AF	Auto Focus
DPOF	Digital Print Order Format
EV	Exposure Value
ISO	International Organization for Standardization
OIS	Optical Image Stabilization
WB	White Balance

Expressions used in this manual

Pressing the shutter

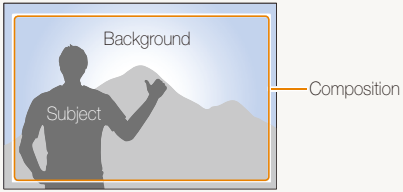
- Half-press [**Shutter**]: press the shutter halfway down
- Press [**Shutter**]: press the shutter all the way down



Half-press [**Shutter**] Press [**Shutter**]

Subject, background, and composition

- **Subject**: the main object in a scene, such as a person, animal, or still life
- **Background**: the objects around the subject
- **Composition**: the combination of a subject and background



Exposure (Brightness)

The amount of light that enters your camera determines the exposure. You can alter the exposure with shutter speed, aperture value, and ISO sensitivity. By altering the exposure, your photos will be darker or lighter.

Normal exposure

Overexposure (too bright)

Basic troubleshooting

Learn to solve common problems by setting shooting options.

	The subject's eyes appear red.	Red eye is caused by the reflection of light from the camera flash off the back of the eye. • Set the flash option to **Red-eye** or **Red-eye Fix**. (p. 53) • If the photo has already been captured, select **Red-eye Fix** in the edit menu. (p. 92)
	Photos have dust spots.	If dust particles are present in the air, you may capture them in photos when you use the flash. • Turn off the flash or avoid capturing photos in a dusty place. • Set ISO sensitivity options. (p. 55)
	Photos are blurred.	Blurring can occur if you capture photos in low light conditions or hold the camera incorrectly. Use the OIS function or half-press [**Shutter**] to ensure the subject is focused. (p. 31)
	Photos are blurred when shooting at night.	As the camera tries to let in more light, the shutter speed slows. This can make it difficult to hold the camera steady enough to take a clear picture and may result in camera shake. • Select Night Shot mode. (p. 39) • Turn on the flash. (p. 53) • Set ISO sensitivity options. (p. 55) • Use a tripod to prevent your camera from shaking.
	Subjects come out too dark because of backlighting.	When the light source is behind the subject or when there is a high contrast between the light and dark areas, the subject may appear too dark. • Avoid shooting toward the sun. • Set the flash option to **Fill in**. (p. 53) • Adjust the exposure. (p. 64) • Set the Auto Contrast Balance (**ACB**) option. (p. 65) • Set the metering option to **Spot** if a bright subject is in the center of the frame. (p. 65)

Quick reference

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Basic functions

Learn about your camera's layout, icons, and basic functions for shooting.

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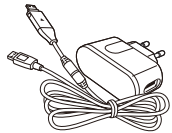
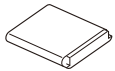
Unpacking

The following items are included in your product box.

Camera

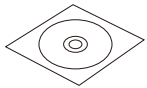


AC adapter/USB cable

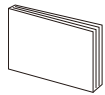


Rechargeable battery

Strap



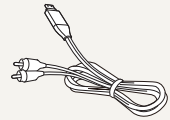
User Manual CD-ROM



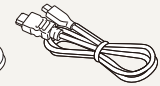
Quick Start Manual

Optional accessories

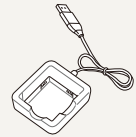
Camera case



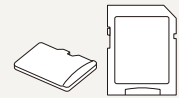
A/V cable



HDMI cable



Battery charger

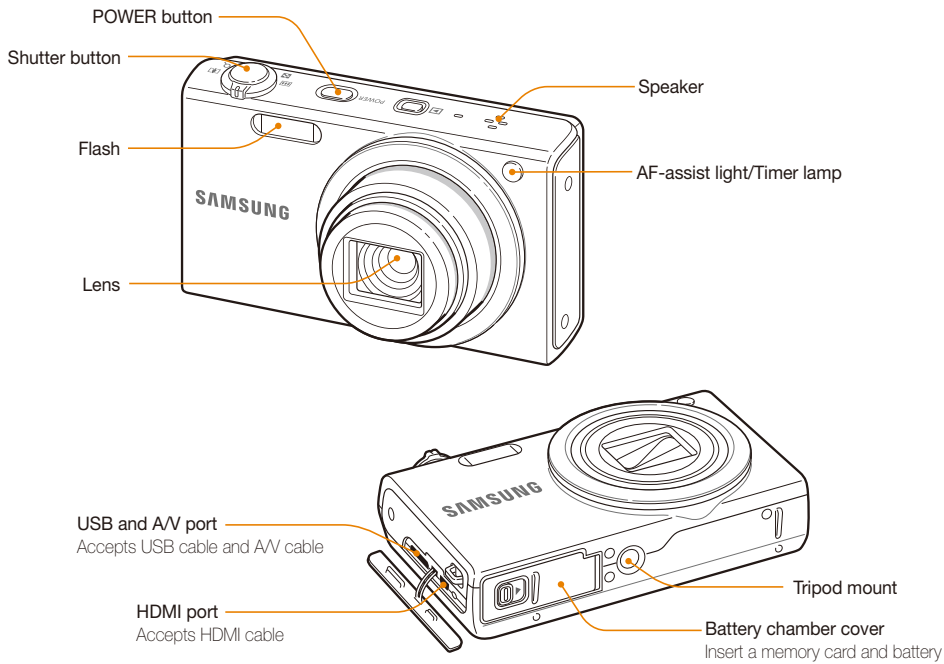


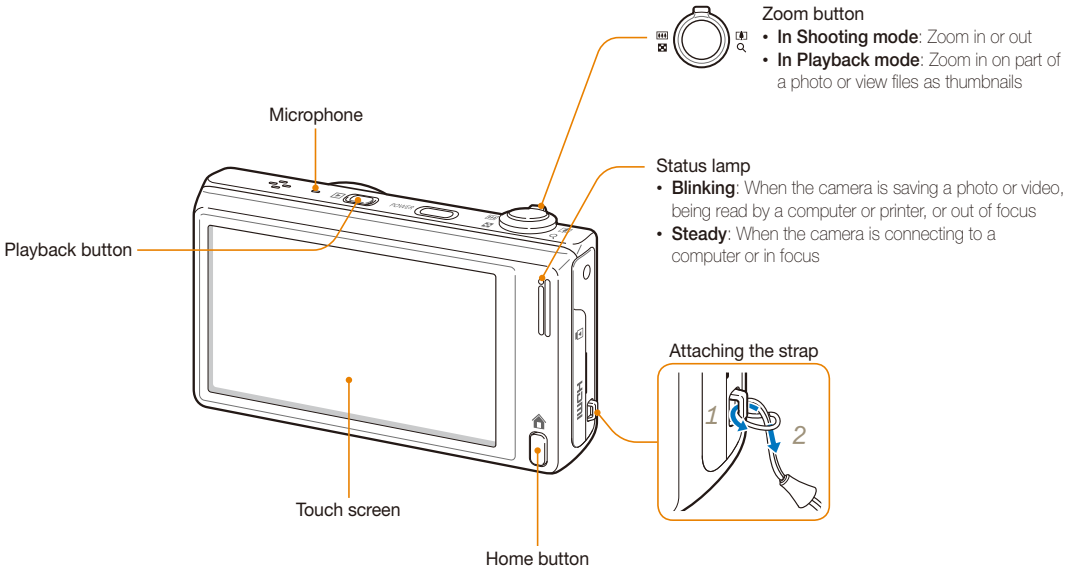
Memory card/
Memory card adapter

The illustrations may differ slightly from the items shipped with your product.

Camera layout

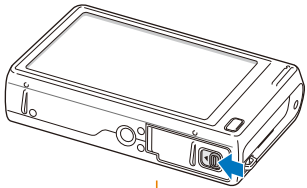
Before you start, familiarize yourself with your camera's parts and their functions.



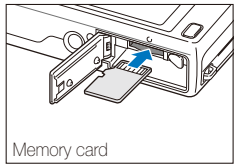

Zoom button
• In Shooting mode: Zoom in or out
• In Playback mode: Zoom in on part of a photo or view files as thumbnails
Microphone
Status lamp
• Blinking: When the camera is saving a photo or video, being read by a computer or printer, or out of focus
• Steady: When the camera is connecting to a computer or in focus
Playback button
Attaching the strap
1
2
Touch screen
Home button

Inserting the battery and memory card

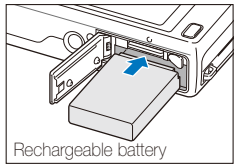
Learn how to insert the battery and an optional memory card into the camera.

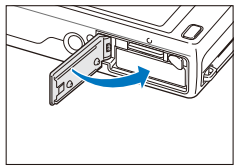


Insert a memory card with the gold-colored contacts facing up.

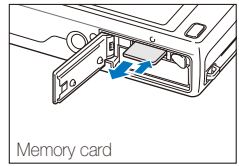


Insert the battery with the Samsung logo facing up.

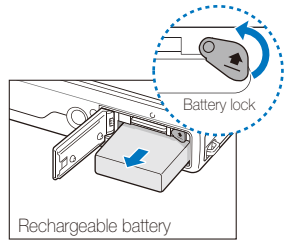




Removing the battery and memory card



Push the card gently until it disengages from the camera, and then pull it out of the slot.



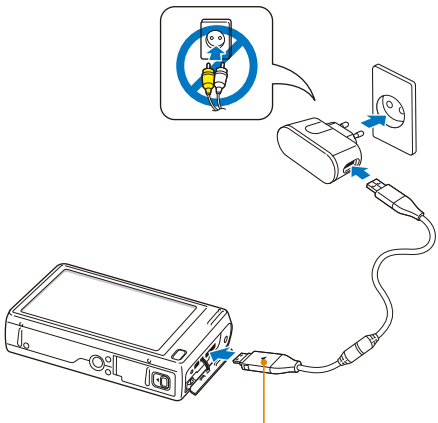
Slide the lock up to release the battery.

You can use the internal memory for temporary storage if a memory card is not inserted.

Charging the battery and turning on your camera

Charging the battery

Before you use the camera for the first time, you must charge the battery. Attach the USB cable to the AC adapter, and then plug the end of cable with the indicator light into your camera.



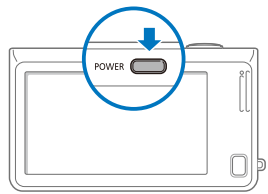
Indicator light

- **Red**: Charging
- **Orange**: Error
- **Green**: Fully charged

Turning on your camera

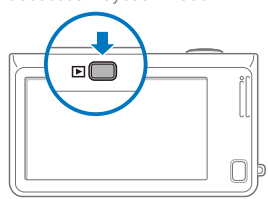
Press [**POWER**] to turn your camera on or off.

- The initial setup screen appears when you turn on the camera for the first time. (p. 18)



Turning on your camera in Playback mode

Press [**Playback**]. The camera turns on and immediately accesses Playback mode.

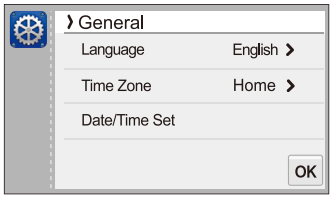


If you turn on your camera by pressing and holding [**Playback**] for about 5 seconds, the camera does not emit any sounds.

Performing the initial setup

When the initial setup screen appears, follow the steps below to configure the camera's basic settings.

1 Touch **Language**.

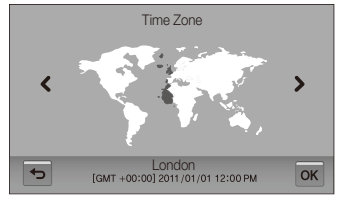


2 Select a language, and then touch **OK**.

3 Touch **Time Zone**.

4 Touch **Home**, and then drag your finger toward ❮ or ❯ to select a time zone.

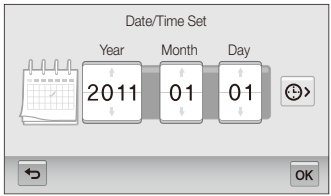
- When you travel to another country, touch **Visit**, and then select a new time zone.



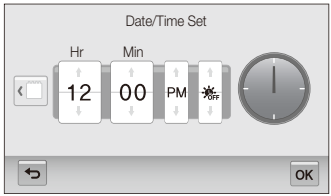
5 Touch **OK** to save.

6 Touch **Date/Time Set**.

7 Touch the up or down arrows to set the date.



8 Touch , and then set the time.

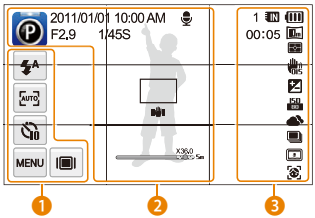


- To set daylight-saving time, touch .

9 Touch **OK** to save settings.

Learning icons

The icons the camera displays on the screen change according to the mode you select or the options you set.



1 Option icons (touch)

Icon	Description
	Flash option
	Auto focus option
	Timer option
MENU	Shooting options
	Display type

2 Status icons

Icon	Description
	Shooting mode
2011/01/01	Current date

Icon	Description
10:00 AM	Current time
F2.9	Aperture value
1/45S	Shutter speed
	Voice memo
	Auto focus frame
	Camera shake
X36.0	Zoom indicator
X36.0	Zoom ratio
5m	Photo resolution when Intelli zoom is on
	Grid lines

3 Status icons

Icon	Description
1	Available number of photos
00:05	Available recording time
IN	Memory card not inserted (Internal memory)
	Memory card inserted

Icon	Description
	• : Fully charged • : Partially charged • : Empty (Recharge)
10m	Photo resolution
1280 HQ	Video resolution
	Metering
OIS	Optical Image Stabilization (OIS)
	Exposure value adjusted
ISO AUTO	ISO sensitivity
	White balance
	Burst type
	Smart Filter
	Image Adjust
	Face detection

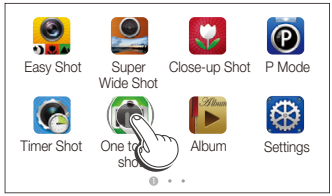
Using the touch screen

Learn how to use the touch screen. The touch screen works best when you touch it with the soft part of your finger.

Do not use sharp objects, such as pens or pencils, to touch the screen. You can damage the screen.

Touching

Touch an icon to select a menu or option.

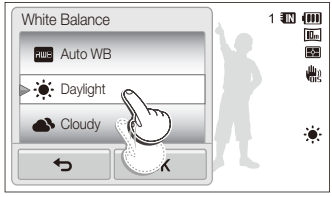


Flicking

Gently flick your finger across the screen.

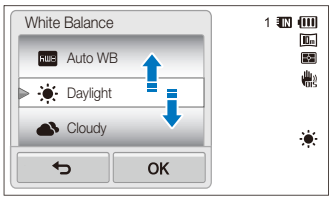
Dragging

Touch and hold a part of the screen, and then drag your finger.



Selecting an option

- Drag the option list up or down until you find the desired option. Touch the option, and then touch **OK**.



- If an option has a setting button, touch the button to turn it on or off.

- The touch screen may not recognize your inputs if you touch multiple items at the same time.
- When you touch or drag the screen, discolorations may occur. This is not a malfunction, but a characteristic of the touch screen. Touch or drag lightly to minimize the effect.
- The touch screen may not work properly if you use the camera in extremely humid environments.
- The touch screen may not work properly if you apply screen protection film or other accessories to the screen.
- Depending on the viewing angle, the screen may appear dim. Adjust the brightness or viewing angle to improve the resolution.

Setting the touch screen and sound

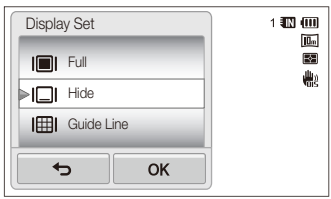
Learn how to change the screen display type and the sound settings.

Setting the display type for the touch screen

You can select from three screen display types. Each displays differently.

1 In Shooting mode, touch .

2 Select an option, and then touch **OK**.



Icon	Description
	Full: Icons are always displayed.
	Hide: Icons are hidden if you perform no operation for 5 seconds (touch the screen to display the icons again).
	Guide Line: Grid lines are displayed. The grid lines are helpful for getting the photo aligned with a surface, such as the horizon or the edges of buildings.

Setting the sound

Set your camera to emit or not emit a sound when you perform functions.

1 On the Home screen, touch .

2 Touch **Sound**.

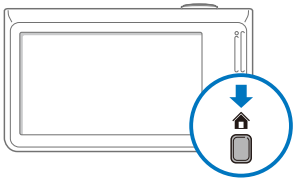
3 Touch the setting button next to **Beep Sound** to turn the beep on or off.

Using the Home screen

You can select a shooting mode or access the settings menu by touching the icons on the Home screen.

Accessing the Home screen

In Shooting or Playback mode, press [**HOME**].
Press [**HOME**] again to return to the previous mode.



No.	Description
1	Touch an icon to access a mode or function. • Scroll to another page by dragging or flicking your finger on the screen.
2	The number of the current page. (❶ ❷ ❸)

Icons on the Home screen

Icon	Description
	Easy Shot: Touch a shooting mode button (photo or movie) on the screen to capture a photo or video. The camera will automatically select an appropriate scene option. (p. 34)
	Super Wide Shot: Capture a wide-angle photo. (p. 38)
	Close-up Shot: Capture close-up photos of subjects. (p. 37)
	P Mode: Capture a photo by manually setting options. (p. 39)
	Timer Shot: Capture a photo automatically by setting the timer. (p. 36)
	One touch shot: Capture a photo with the touch of your finger. (p. 36)
	Album: View files by category in Smart album. (p. 80)
	Settings: Adjust settings to match your preferences. (p. 104)
	HD Movie Recording: Record a video in high definition. (p. 40)
	SD Movie Recording: Record a video in 640 X 480 resolution to upload onto the web. (p. 41)

Icon	Description
	Smart Filter: Touch a shooting mode button (photo or movie) on the screen to capture a photo or video and apply various filter effects. (p. 44)
	Palette Effect Recording: Record a video with palette effects. (p. 46)
	Magic Frame shot: Capture a photo with various frame effects. (p. 43)
	Object Highlight: Capture a photo with the subject's background blurred. (p. 42)
	Beauty Shot: Capture a portrait with options to hide facial imperfections. (p. 42)
	Night Shot: Capture a night scene by adjusting shutter speed and aperture value. (p. 39)
	Help: View the help and learn how to use the camera. (p. 26)
	Magazine View: View files with page flip effect. (p. 81)
	Slide Show: View photos as a slide show with effects and music. (p. 85)
	Edit: Edit photos with various effects. (p. 90)
	Delete: Delete saved photos. (p. 83)
	Reset: Reset to the default settings without deleting saved images. (p. 109)

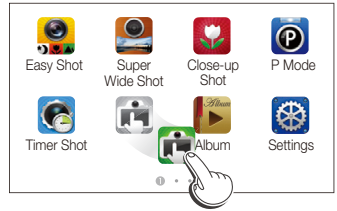
Rearranging icons

You can rearrange the icons on the Home screen in any order.

1 Touch and hold an icon.

2 Drag it to a new location.

- To move an icon to another page, drag it to the left or right edge of the screen. When you drop the icon to a new location, the other icons will neatly slide out of the way.

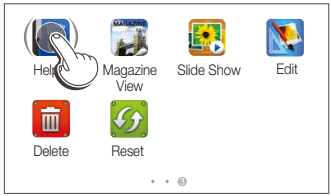


Using the Help mode

You can view a simple application description and an operation guide in Help mode.

Viewing the Application description

1 On the Home screen, touch .



2 Touch and hold a part of the screen, and then drag your finger to select an option.

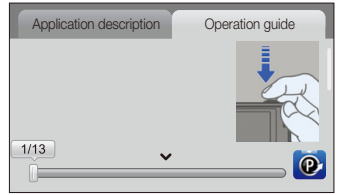
3 Touch to access a mode or function.

Viewing the Operation guide

1 On the Home screen, touch .

2 Touch **Operation guide**.

3 Touch and hold a part of the screen, and then drag your finger to select an option.

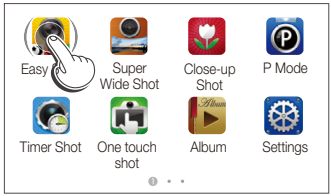


4 Touch to access a mode or function.

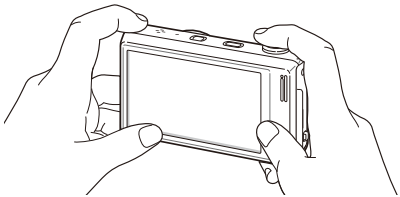
Capturing photos

Learn how to capture photos easily and quickly in Easy Shot mode.

1 On the Home screen, touch .

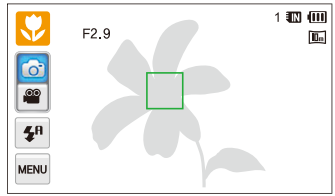


2 Align your subject in the frame.



3 Half-press [**Shutter**] to focus.

- A green frame means the subject is in focus.
- A red frame means the subject is out of focus.

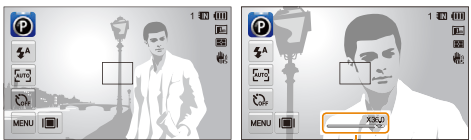


4 Press [**Shutter**] to capture a photo.

See page 31 for tips to get clearer photos.

Zooming

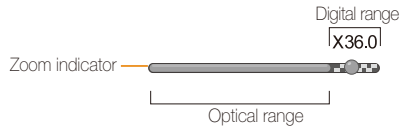
You can capture close-up photos by adjusting the zoom. Your camera has a 12X Optical zoom, 2X Intelli zoom, and 5X Digital zoom. The Intelli zoom and Digital zoom cannot be used at the same time.



The available zoom ratio for videos differs from photo zoom ratio.

Digital zoom

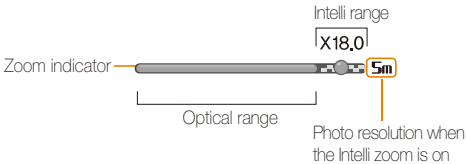
If the zoom indicator is in the digital range, your camera is using the Digital zoom. By using both the Optical zoom and Digital zoom, you can zoom in up to 60 times.



- The Digital zoom is available only in P Mode and Timer Shot mode.
- The Digital zoom is not available with the Smart Filter effect or the One touch shooting and Smart Touch AF options.
- If you capture a photo with the Digital zoom, the photo quality may deteriorate.

Intelli zoom

If the zoom indicator is in the Intelli range, your camera is using the Intelli zoom. Photo resolution varies according to the zoom rate if you use the Intelli zoom. By using both the Optical zoom and Intelli zoom, you can zoom in up to 24 times.



- The Intelli zoom is available only in Easy shot (photo), P Mode, and Timer Shot modes.
- The Intelli zoom is not available with a Smart Filter effect, or Smart Touch AF option.
- The Intelli zoom is available only when you set a 4:3 resolution ratio. If you set another resolution ratio with Intelli zoom on, the Intelli zoom will be turned off automatically.
- The Intelli zoom helps you capture a photo with less quality deterioration than the Digital zoom. However, the photo quality may be lower than when you use the Optical zoom.

Setting Intelli zoom

1 In Shooting mode, touch MENU.

2 Touch the setting button next to **Intelli Zoom**.

Reducing camera shake (OIS)

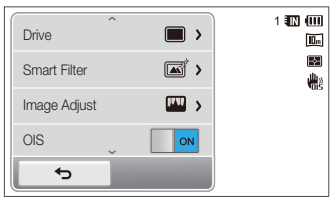
Reduce camera shake optically in Shooting mode.

Before correction

After correction

1 In Shooting mode, touch MENU.

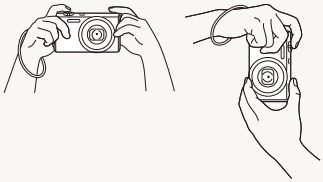
2 Touch the setting button next to **OIS**.



- OIS may not function properly when:
  - you move your camera to follow a moving subject
  - you use the Digital zoom
  - there is too much camera shake
  - the shutter speed is slow (for example, when you capture night scenes)
  - the battery is low
  - you capture a close-up shot
- If you use the OIS function with a tripod, the vibration of the OIS sensor may blur your images. Deactivate the OIS function when you use a tripod.
- If the camera is hit or dropped, the display will be blurry. If this occurs, turn off the camera, and then turn it on again.

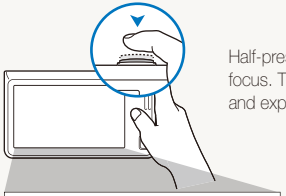
Tips for getting a clearer photo

Holding your camera correctly

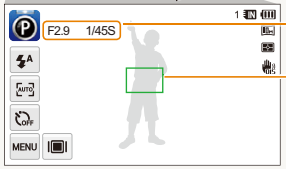


Ensure nothing is blocking the lens.

Half-pressing the shutter button



Half-press [**Shutter**] to adjust the focus. The camera adjusts the focus and exposure automatically.



The camera sets the aperture value and shutter speed automatically.

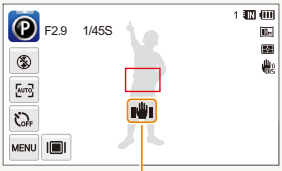
Focus frame

- Press [**Shutter**] to capture the photo if the focus frame appears in green.
- Change the composition and half-press [**Shutter**] again if the focus frame appears in red.

Reducing camera shake

Set the Optical Image Stabilization option to reduce camera shake. (p. 30)

When is displayed



Camera shake

When you shoot in the dark, avoid setting the flash option to **Slow Sync** or **Off**. The aperture remains open longer and it may be harder to hold the camera steady long enough to take a clear picture.

- Use a tripod or set the flash option to **Fill in**. (p. 53)
- Set ISO sensitivity options. (p. 55)

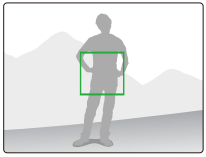
Preventing your subject from being out of focus

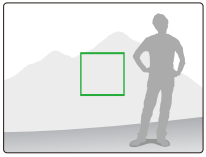
It may be difficult to get your subject in focus when:

- there is little contrast between the subject and background (for example, when your subject is wearing clothing that is similar in color to the background)
- the light source behind the subject is too bright
- the subject is shiny or reflective
- the subject includes horizontal patterns, such as blinds
- the subject is not positioned in the center of the frame

Using the focus lock

Half-press [**Shutter**] to focus. When the subject is in focus, you can reposition the frame to change the composition. When you are ready, press [**Shutter**] to capture your photo.

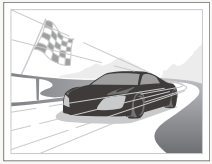




- When you capture photos in low light

Turn on the flash. (p. 53)

- When subjects are moving rapidly



Use the Continuous or Motion Capture function. (p. 68)

Extended functions

Learn how to capture a photo, record a video, and record a voice memo by selecting a mode.

Using shooting modes 34
- Using the Easy Shot mode 34
- Using the One Touch Shot mode 36
- Using the Timer Shot mode 36
- Using the Close-up Shot mode 37
- Using the Super Wide Shot mode 38
- Using the Night Shot mode 39
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- Using the HD Movie Recording mode 40
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Using effect modes 42
- Using the Beauty Shot mode 42
- Using the Object Highlight mode 42
- Using the Magic Frame Shot mode 43
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Recording voice memos 47
- Recording a voice memo 47
- Adding a voice memo to a photo 48

Using shooting modes

Capture photos or record videos by selecting the best shooting mode for the conditions.

Using the Easy Shot mode

In Easy Shot mode, your camera automatically chooses the appropriate camera settings when you touch a shooting mode button (photo or movie). The Easy Shot mode is helpful if you are not familiar with the camera settings for various scenes.

1 On the Home screen, touch .
- The photo mode is set by default.
- To switch to movie mode, touch .

2 Align your subject in the frame.
- The camera automatically selects a scene and adjusts its settings. An appropriate scene icon appears at the top left of the screen.
- To use the movie mode, skip to step 4.

3 Half-press [**Shutter**] to focus.
- In several scenes, the camera automatically captures a photo when you half-press [**Shutter**].

4 Press [**Shutter**] to capture the photo.
- In the movie mode, press [**Shutter**] or touch ● to start recording.
- To stop recording, press [**Shutter**] again or touch ■.

Available scenes in photo mode

Icon	Description
	Landscapes
	Scenes with bright white backgrounds
	Landscapes at night (when the flash is off)
	Portraits at night
	Landscapes with backlighting
	Portraits with backlighting
	Portraits
	Close-up photos of objects
	Close-up photos of text
	Sunsets
	Clear skies
	Forested areas
	Close-up photos of colorful subjects
	Camera is stabilized or on a tripod (when shooting in the dark)
	Actively moving subjects
	Fireworks (when using a tripod)

Available scenes in movie mode

Icon	Description
	Landscapes
	Sunsets
	Clear skies
	Forested areas
	Actively moving subjects

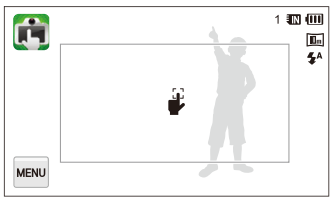
- If the camera does not recognize an appropriate scene mode, it uses the default settings for the Easy Shot mode.
- Even if it detects a face, the camera may not select a portrait mode depending on the subject's position or lighting.
- The camera may not select the correct scene depending on the shooting conditions, such as camera shake, lighting, or distance to the subject.
- Even if you use a tripod, the camera may not detect the mode if the subject is moving.
- In Easy Shot mode, the camera consumes more battery power, because it changes settings often to select appropriate scenes.

Using the One Touch Shot mode

In One Touch Shot mode, you can capture a photo with the touch of your finger.

1 On the Home screen, touch .

2 Touch a subject on the screen to capture the photo.

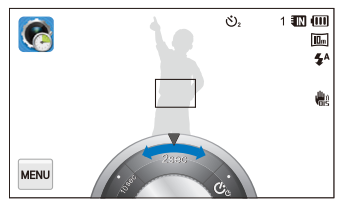


Using the Timer Shot mode

In Timer Shot mode, you can set the camera to capture a photo automatically after a specified number of seconds by setting the timer.

1 On the Home screen touch .

2 Select an option by dragging the dial in the direction indicated by the arrow.



Icon	Description
OFF	**Off**: The timer is not active.
10	**10 Sec**: Capture a photo after a 10-second delay.
2	**2 Sec**: Capture a photo after a 2-second delay.
	Double: Capture one photo after a 10-second delay and another photo after a 2-second delay.

3 Press [**Shutter**] to start the timer.

- The AF-assist light/timer lamp blinks. The camera will automatically capture a photo at the specified time.

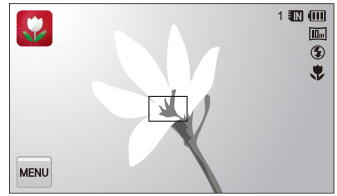
Press [**Shutter**] to cancel the timer.

Using the Close-up Shot mode

In Close-up Shot mode, you can capture close-up photos of subjects, such as flowers or insects.

1 On the Home screen, touch .

2 Align your subject in the frame, and then half-press [**Shutter**] to focus.

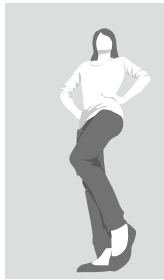


3 Press [**Shutter**] to capture the photo.

Using the Super Wide Shot mode

In Super Wide Shot mode, you can capture a landscape photo with a super-wide, 21mm focal length. You can also emphasize subjects' upper or lower body by shooting at high or low angles.

High angle

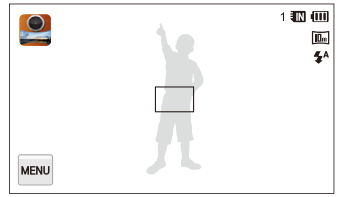


Low angle

Landscape

1 On the Home screen, touch .

2 Align your subject in the frame, and then half-press [**Shutter**] to focus.



3 Press [**Shutter**] to capture the photo.

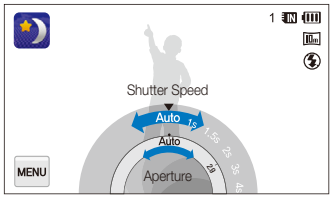
- In Super Wide Shot mode, the focal length is set to 21 mm.
- Images captured in Super Wide Shot mode may contain minute distortions. This is normal and does not represent a malfunction.
- To reduce the effects of distortion, ensure that the subject is in the center of the scene when taking portraits.
- If you use the flash in Super Wide Shot mode, the edges of the photo may appear dark.
- The zoom will not work in this mode.

Using the Night Shot mode

In Night Shot mode, you can use a slow shutter speed to extend the time the shutter stays open. Increase the aperture value to prevent overexposure.

1 On the Home screen, touch .

2 Drag the dials on the screen to the arrow directions below to adjust shutter speed and aperture value.



3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.

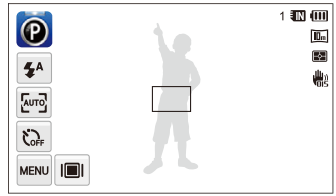
Use a tripod to prevent blurry photos.

Using the P Mode

In P Mode, you can set most options, except the shutter speed and aperture value, which the camera sets automatically.

1 On the Home screen, touch .

2 Touch MENU, and then set desired options. (For a list of options, refer to page 49.)



3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.

Using the HD Movie Recording mode

In HD Movie Recording mode, you can record high-definition videos of up to 20 minutes in length. The camera saves recorded videos as MP4 (H.264) files.

- H.264 (MPEG-4 part10/AVC) is a high-compression video format established by the international standard organizations ISO-IEC and ITU-T.
- Some memory cards may not support high definition recording. In this case, set a lower resolution.
- Memory cards with slow write speeds will not support high-resolution videos and high-speed videos. To record high-resolution or high-speed videos, use memory cards with faster write speeds.
- If you have activated Optical Image Stabilization, the camera may record the sounds the OIS makes when it operates.

1 On the Home screen, touch HD.

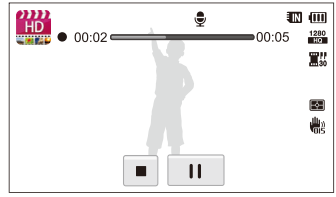
2 Touch MENU, and then set the desired options. (For a list of options, refer to page 49.)

3 Press [**Shutter**] or touch to ● start recording.

4 Press [**Shutter**] again or touch ■ to stop recording.

Pause recording

The camera allows you to temporarily pause a video while recording. With this function, you can record separate scenes as a single video.



- Touch ❙❙ to pause while recording.
- Touch ● to resume.

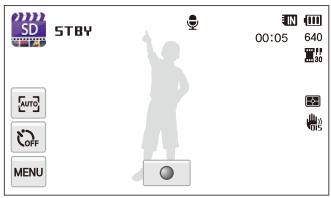
Using the SD Movie Recording mode

In SD Movie Recording mode, you can record a video in 640 X 480 resolution which can be easily uploaded to the web. You can record SD-definition videos of up to 20 minutes in length. The camera saves recorded videos as MP4 (H.264) files.

1 On the Home screen, touch SD.

2 Touch MENU, and then set the desired options. (For a list of options, refer to page 49.)

3 Press [**Shutter**] or touch to ● start recording.



4 Press [**Shutter**] again or touch ■ to stop recording.

Using effect modes

Capture photos or record videos with various effects.

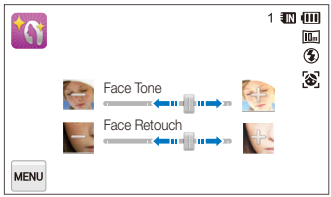
Using the Beauty Shot mode

In Beauty Shot mode, you can capture a portrait with options to hide facial imperfections.

1 On the Home screen, touch .

2 Drag the sliders or touch the sample photos to adjust **Face Tone** and **Face Retouch**.

- For example, increase the **Face Tone** setting to make skin appear lighter.



3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.

When using the Beauty Shot mode, the focus distance will be set to Auto Macro.

Using the Object Highlight mode

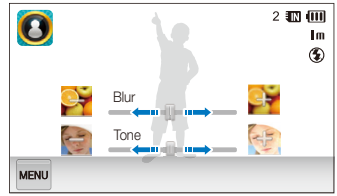
The Object Highlight mode makes the subject stand out from the background by adjusting the depth of field.

1 On the Home screen, touch .

2 Position the camera according to the optimum distance displayed on the screen.

- The optimum distance will vary, based on the zoom ratio you use.

3 Drag the sliders or touch the sample photos to adjust **Blur** and **Tone**.



4 Half-press [**Shutter**] to focus.

- When the camera can apply the Object Highlight effect, will appear.
- When the camera cannot apply the Object Highlight effect, will appear. If this occurs, adjust the distance from the camera to the subject.

5 Press [**Shutter**] to capture the photo.

- Available resolutions in Object Highlight mode are 3m and 1m.
- If the shooting distance is not within the optimum range, you can capture a photo but the Object Highlight effect will not be applied.
- The Object Highlight effect cannot be used in dark places.
- The Object Highlight effect cannot be used with the Optical zoom at 3X or higher.
- Digital zoom is not available in Object Highlight mode.
- Use a tripod to prevent camera shake as the camera captures 2 consecutive photos to apply the effect.
- The subject and the background should have a significant contrast in color.
- Subjects should be positioned far away from the background for the greatest effect.

Using the Magic Frame Shot mode

In Magic Frame Shot mode, you can apply various frame effects to your photos. The shape and the feel of the photos will change according to the frame you select.

1 On the Home screen, touch .

2 Select a desired frame.

3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.

In Magic Frame Shot mode, the resolution is automatically set to 2m.

Using the Smart Filter mode

In Smart Filter mode, you can apply various filter effects to your photos.

Miniature

Vignetting

Fish-eye

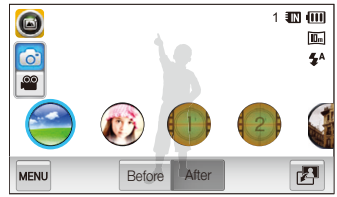
Sketch

1 On the Home screen, touch .

- The photo mode is set by default.
- To switch to movie mode, touch .

2 Touch a desired filter.

- To view the original photo, touch **Before**.
- To view the photo with the filter effect, touch **After**.



3 Align your subject in the frame.

- To use the movie mode, skip to step 5.

4 Half-press [**Shutter**] to focus.

5 Press [**Shutter**] to capture the photo.

- In the movie mode, press [**Shutter**] or touch ● to start recording.
- To stop recording, press [**Shutter**] again or touch ■.

Available filters in photo mode

Option	Description
Miniature	Apply a tilt-shift effect to make the subject appear in miniature.
Vignetting	Apply the retro-looking colors, high contrast, and strong vignette effect of Lomo cameras.
Soft-Focus	Hide facial imperfections or apply dreamy effects.
Old Film 1	Apply vintage film effect 1.
Old Film 2	Apply vintage film effect 2.
Half Tone Dot	Apply a halftone effect.
Sketch	Apply a pen sketch effect.
Fish-eye	Blacken the edges of the frame and distort objects to imitate the visual effect of a fisheye lens.
Defog	Make a photo clearer.
Classic	Apply a black and white effect.
Retro	Apply a sepia tone effect.
Negative	Apply a negative film effect.

- To apply filter effects to saved photos, touch .
- When you select **Sketch**, the resolution will change to 5M and below.

Available filters in movie mode

Option	Description
Miniature	Apply a tilt-shift effect to make the subject appear in miniature.
Vignetting	Apply the retro-looking colors, high contrast, and strong vignette effect of Lomo cameras.
Half Tone Dot	Apply a halftone effect.
Sketch	Apply a pen sketch effect.
Fish-eye	Distort close objects to imitate the visual effect of a fisheye lens.
Defog	Make the image clearer.
Classic	Apply a black and white effect.
Retro	Apply a sepia tone effect.
Negative	Apply a negative film effect.

- If you select **Miniature**, the speed of the video will increase.
- If you select **Miniature**, the camera will not record sound.
- If you select **Miniature**, **Vignetting**, **Half Tone Dot**, **Sketch**, **Fish-eye**, or **Defog**, the recording speed will be set to HQ and the recording resolution will be set to less than **640**.

Using the Palette Effect Recording mode

In Palette Effect Recording mode, you can record a video with effects to make specific colors stand out.

1 On the Home screen, touch .

2 Touch a desired palette.

Option	Description
Palette Effect 1	Create a vivid look with sharp contrast and a red tone.
Palette Effect 2	Make scenes clean and clear by applying a soft blue tone.
Palette Effect 3	Apply a soft brown tone.
Palette Effect 4	Create a cold and monotone effect.

3 Press [**Shutter**] or touch ● to start recording.

4 Press [**Shutter**] again or touch ■ to stop recording.

Recording voice memos

Learn how to record a voice memo that you can play back later. You can also add a voice memo to a photo to remind you of the shooting conditions, circumstances, etc.

You will get the best sound quality when you speak 16 in (40 cm) from the camera.

Recording a voice memo

1 On the Home screen, touch .

2 Touch MENU → **Voice** → **Record** → **OK**.

3 Press [**Shutter**] or touch ● to start recording.

- Touch ❙❙ to pause or touch ● to resume.
- Each memo can be up to 10 hours long if memory is available.

4 Press [**Shutter**] again or touch ■ to stop recording.

To view the list of saved voice memos, touch .

Adding a voice memo to a photo

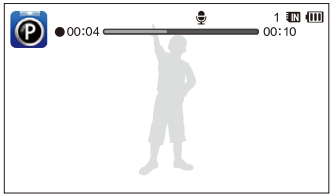
In P Mode, you can add a voice memo to a captured photo.

1 On the Home screen, touch .

2 Touch MENU → **Voice** → **Memo** → **OK**.

3 Align your subject in the frame, and then capture a photo.

- The camera begins to record a voice memo right after you capture the photo.



4 Record a short voice memo (10 seconds maximum).

- Press [**Shutter**] to stop recording a voice memo before the 10 seconds are up.

You cannot add voice memos to photos in the burst mode.

Shooting options

Learn how to set the options in Shooting mode.

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- Selecting a resolution 50
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Selecting a resolution and quality

Learn how to change the image resolution and quality settings.

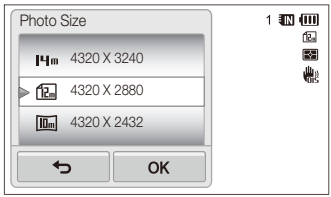
Selecting a resolution

As you increase the resolution, your photo or video will include more pixels, so it can be printed on larger paper or displayed on a larger screen. When you use a high resolution, the file size will also increase.

Setting a photo resolution

1 In Shooting mode, touch MENU → **Photo Size**.

2 Select an option, and then touch **OK**.

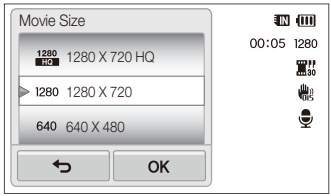


Icon	Description
14m	**4320 X 3240**: Print on A1 paper.
12m	**4320 X 2880**: Print on A1 paper in wide ratio (3:2).
10m	**4320 X 2432**: Print on A1 paper in panorama ratio (16:9) or play back on an HDTV.
10m	**3648 X 2736**: Print on A2 paper.
5m	**2592 X 1944**: Print on A4 paper.
3m	**1984 X 1488**: Print on A5 paper.
2m	**1920 X 1080**: Print on A5 paper in panorama ratio (16:9) or play back on an HDTV.
1m	**1024 X 768**: Attach to an email.

Setting a video resolution

1 In Shooting mode, touch MENU → **Movie Size**.

2 Select an option, and then touch **OK**.



Icon	Description
1280 HQ	**1280 X 720 HQ**: Play back high-quality files on an HDTV.
1280	**1280 X 720**: Play back on an HDTV.
640	**640 X 480**: Play back on an analog TV.
320	**320 X 240**: Post on a web page.

Setting a video resolution is available only in Easy Shot (movie), Smart Filter (movie), and Palette Effect Recording modes.

Selecting image quality

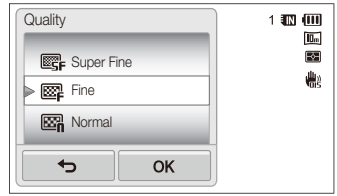
Set the photo and video quality settings. Higher image quality settings will result in larger file sizes.

Setting the photo quality

The camera compresses and saves the photos you capture in the JPEG format.

1 In Shooting mode, touch MENU → **Quality**.

2 Select an option, and then touch **OK**.



Icon	Description
SF	**Super Fine**: Capture photos in super high quality.
F	**Fine**: Capture photos in high quality.
N	**Normal**: Capture photos in normal quality.

Setting a photo quality is not available in Easy Shot (photo) mode.

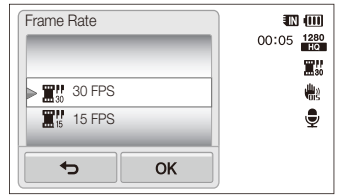
Setting the video quality

The camera compresses and saves the videos you record in the MP4 (H.264) format.

1 In Shooting mode, touch MENU → **Frame Rate**.

2 Select an option, and then touch **OK**.

- As the frame rate increases, action appears more natural, but the file size also increases.



Icon	Description
30	**30 FPS**: Record 30 frames per second.
15	**15 FPS**: Record 15 frames per second.

Setting a video quality is not available in Smart Filter (video) mode.

Shooting in the dark

Learn how to capture photos at night or in low light conditions.

Preventing red-eye

If the flash fires when you capture a photo of a person in the dark, a red glow may appear in the person's eyes. To prevent this, select **Red-eye** or **Red-eye Fix**. Refer to flash options in "Using the flash."

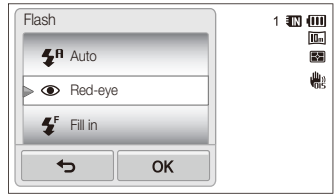
This option is available in P Mode, Beauty Shot, and Night Shot modes.

Using the flash

Use the flash when you capture photos in the dark or when you need more light in your photos.

1 In Shooting mode, touch MENU → **Flash**.

2 Select an option, and then touch **OK**.



Icon	Description
	Off: • The flash will not fire. • The camera will display the shake warning when you are shooting in low light.
	Auto: The flash will fire automatically when the subject or background is dark.

Icon	Description
	Red-eye: • The flash will fire twice when the subject or background is dark to reduce the red-eye effect. • There is an interval between the 2 bursts of the flash. Do not move until the flash fires a second time.
	Fill in: • The flash always fires. • The camera automatically adjusts the flash's intensity.
	Slow Sync: • The flash fires and the shutter stays open longer. • This option is recommended when you want to capture ambient light to reveal more details in the background. • Use a tripod to prevent your photos from blurring. • The camera will display the shake warning when you are shooting in low light.
	Red-eye Fix: • The flash fires twice when the subject or background is dark, and the camera corrects red-eyes through its advanced software analysis. • There is an interval between the 2 bursts of the flash. Do not move until the flash fires a second time.

Available options may differ depending on the shooting mode.

- Flash options are not available if you set burst options or select **Self-Portrait** or **Blink Detection**.
- Make sure that your subjects are within the recommended distance from the flash. (p. 124)
- If light from the flash is reflected or there is a substantial amount of dust in the air, tiny spots may appear in your photo.

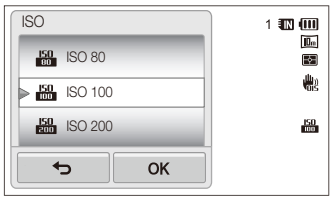
Adjusting the ISO sensitivity

The ISO sensitivity is the measure of a film's sensitivity to light as defined by the International Organization for Standardization (ISO). The higher the ISO sensitivity you select, the more sensitive to light your camera becomes. With a higher ISO sensitivity, you can get a better photo without using the flash.

1 In Shooting mode, touch MENU → **ISO**.

2 Select an option, and then touch **OK**.

- Select **Auto** to have the camera select an appropriate ISO sensitivity automatically based on the brightness of the subject and lighting.



- Higher ISO sensitivities may result in more image noise.
- You can select ISO 3200 only when the resolution is set to 3M and below.

Changing the camera's focus

Learn how to adjust the camera's focus to suit the subject and the shooting conditions.

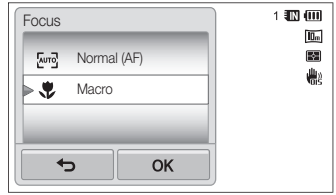
Using macro

Use macro to capture close-up photos of subjects, such as flowers or insects.

- Try to hold the camera firmly to prevent blurry photos.
- Turn off the flash if the distance to the subject is less than 16 in (40 cm).

1 In Shooting mode, touch MENU → **Focus**.

2 Select **Macro**, and then touch **OK**.



Icon	Description
AUTO	**Normal (AF)**: Focus on a subject farther than 32 in (80 cm).
	Macro: Manually focus on a subject that is 2-32 in (6-80 cm) from the camera. 39-79 in (100-200 cm) when you use the zoom.

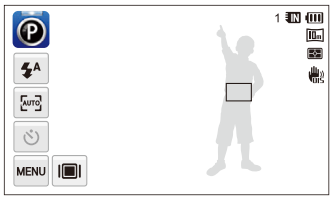
Using smart touch focus

Smart Touch AF allows you to track and auto focus on your subject, even when you are moving.

1 In Shooting mode, touch MENU → **Focus Area**.

2 Select **Smart Touch AF**, and then touch **OK**.

3 Touch the subject you want to track in the touch area.



- The white frame means that your camera is tracking the subject.
- The green frame means that your subject is in focus when you half-press [**Shutter**].

- If you do not touch any area on the screen, the focus frame will appear in the center of the screen.
- Tracking a subject may fail when:
  - the subject is too small
  - the subject moves excessively
  - the subject is backlit or you are shooting in a dark place
  - colors or patterns on the subject and the background are the same
  - the camera shakes excessively
- When tracking a subject fails, the focus frame will appear as a white single-line frame (▭).
- If the camera fails to track the subject, you must reselect the subject to track.
- If the camera fails to focus, the focus frame will change to a red single-line frame (▭).
- If you use this function, you cannot set self timer options, Face Detection options, and Smart Filter options.

Adjusting the focus area

You can get clearer photos by selecting an appropriate focus area according to your subject's location in the scene.

1 In Shooting mode, touch MENU → **Focus Area**.

2 Select an option, and then touch **OK**.

Icon	Description
	Center AF: Focus on the center of the frame (suitable when subjects are located at or near the center).
	Multi AF: Focus on one or more of 9 possible areas.
	One Touch Shooting: Focus on the subject and capture a photo by touching the image on the screen. (p. 36)
	Smart Touch AF: Focus on and track the subject that you touch on the screen. (p. 57)

Using face detection

If you use Face Detection options, your camera can automatically detect a human face. When you focus on a human face, the camera adjusts the exposure automatically. Use **Blink Detection** to detect closed eyes or **Smile Shot** to capture a smiling face. You can also use **Smart Face Recognition** to register faces and prioritize the focus on them.

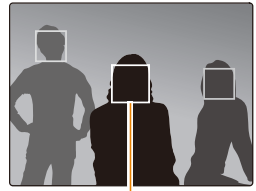
- The camera automatically tracks the registered face.
- Face Detection may not be effective when:
  - the subject is far from the camera (The focus frame will appear orange for Smile Shot and Blink Detection.)
  - it is too bright or too dark
  - the subject is not facing the camera
  - the subject is wearing sunglasses or a mask
  - the subject's facial expression changes drastically
  - the subject is backlit or the lighting conditions are unstable
- Face Detection is not available when you set Smart Filter effects or Smart Touch AF.
- Depending on the shooting options, available Face Detection options may differ.
- Depending on the Face Detection options you selected, the timer function may not be available or available timer options may differ.
- When you set the Face Detection options, some burst options are not available.
- When you capture photos of detected faces, they will be registered in the face list.
- You can view registered faces in order of priority in Playback mode. (p. 79) Even though faces are registered successfully, they may not be classified in Playback mode.
- A face detected in Shooting mode may not appear in the face list or Smart Album.

Detecting faces

Your camera automatically detects up to 10 human faces in one scene.

1 In Shooting mode, touch MENU → **Face Detection**.

2 Select **Normal**, and then touch **OK**.



The nearest face appears in a white focus frame and the rest of the faces appear in gray focus frames.

- The closer you are to the subjects, the quicker your camera will detect faces.
- To focus on a subject in a gray focus frame, touch the face in the frame.
- The camera may not register detected faces if you set burst options such as **Continuous**, **Motion Capture**, and **AEB**.

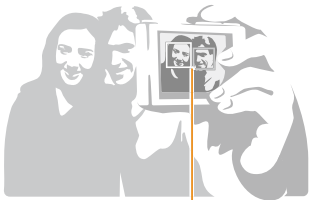
Capturing a self portrait shot

Capture photos of yourself. The focus distance will be set to close-up and your camera will emit a beep.

1 In Shooting mode, touch MENU → **Face Detection**.

2 Select **Self-Portrait**, and then touch **OK**.

3 When you hear a quick beep, press [**Shutter**].



When faces are located in the center, the camera beeps rapidly.

If you turn **Volume** off in the sound settings, the camera will not emit a beep. (p. 105)

Capturing a smile shot

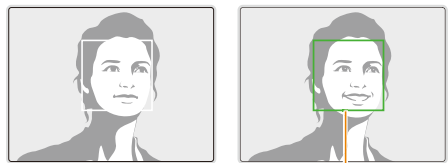
The camera automatically releases the shutter when it detects a smiling face.

1 In Shooting mode, touch MENU → **Face Detection**.

2 Select **Smile Shot**, and then touch **OK**.

3 Compose your shot.

- The camera automatically releases the shutter when it detects a smiling face.



When your subject smiles broadly, your camera can detect the smile more easily.

Detecting eye blinking

If your camera detects closed eyes, it will automatically capture 2 photos in succession.

1 In Shooting mode, touch MENU → **Face Detection**.

2 Select **Blink Detection**, and then touch **OK**.

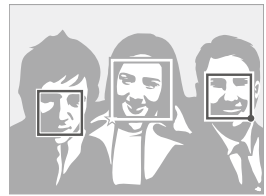
- Hold your camera still while "**Capturing**" is displayed on the screen.
- If Blink Detection fails, the "**Picture taken with eyes closed.**" message appears. Capture another photo.

Using Smart Face Recognition

The camera automatically registers faces that you frequently photograph. The Smart Face Recognition feature will automatically prioritize the focus on those faces and on favorite faces. The Smart Face Recognition feature is available only when you use a memory card.

1 In Shooting mode, touch MENU → **Face Detection**.

2 Select **Smart Face Recognition**, and then touch **OK**.



The nearest face appears in a white focus frame and the rest of the faces appear in gray focus frames.

- ★: Faces that you have registered as favorites. (To register faces as favorites, refer to page 62.)
- : Faces that the camera automatically registers.

- The camera may recognize and register faces incorrectly depending on lighting conditions, drastic changes in the subject's pose or face, and whether or not the subject is wearing glasses.
- The camera can automatically register up to 14 faces. If the camera recognizes a new face when 14 faces have already been registered, it will replace the lowest priority face with the new one.
- The camera can detect up to 5 favorite faces in one scene.

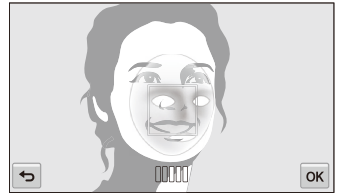
Registering faces as your favorites (My Star)

You can register your favorite faces to prioritize the focus and exposure on those faces. This feature is available only when you use a memory card.

1 In Shooting mode, touch MENU → **Smart FR Edit**.

2 Select **My Star**, and then touch **OK**.

3 Align your subject's face with the oval guideline, and then press [**Shutter**] to register the face.



- If the subject's face is not aligned with the oval guideline, the white frame will not appear.
- Capture 5 photos of the subject's face: one each from the front, left, right, above, and below.
- Capture photos of one person at a time when registering faces.

4 Touch ⮌ when the face list appears.
- Your favorite faces are indicated with a ★ on the face list.

- You can register up to 6 favorite faces.
- The flash will not fire when you register a favorite face.
- If you register the same face twice, you can delete one of the faces in the face list.

Viewing your favorite faces

1 In Shooting mode, touch MENU → **Smart FR Edit**.

2 Select **Face List**, and then touch **OK**.

- To change the ranking of your favorite faces, touch ★123. (p. 79)
- To delete a favorite face, touch ★🗑.

Adjusting brightness and color

Learn how to adjust the brightness and color for better image quality.

Adjusting the exposure manually (EV)

Depending on the intensity of the ambient light, your photos may be too bright or dark. In these cases, you can adjust the exposure to get a better photo.

Darker (-)

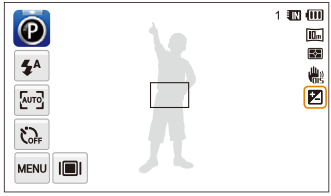
Neutral (0)

Brighter (+)

1 In Shooting mode, touch MENU → **EV**.

2 Select a desired value, and then touch **OK**.

- The photo will be brighter as exposure increases.
- When you adjust the exposure value, the icon will appear as shown below.



- Once you adjust the exposure, the setting will be stored automatically. You may need to change the exposure value later to avoid overexposure or underexposure.
- If you cannot decide on an appropriate exposure, select **AEB** (Auto Exposure Bracket). The camera will capture 3 consecutive photos, each with a different exposure: normal, underexposed, and overexposed. (p. 68)

Compensating for backlighting (ACB)

When the light source is behind your subject or there is high contrast between your subject and the background, your subject is likely to appear dark in the photo. In this case, set the Auto Contrast Balance (ACB) option.

Without ACB

With ACB

1 In Shooting mode, touch MENU.

2 Touch the setting button next to **ACB**.

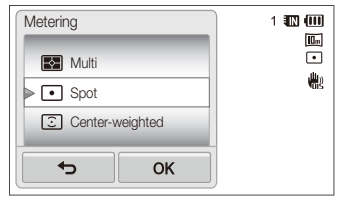
- The ACB feature is always on in Easy Shot (photo) mode.
- The ACB feature is not available when you set **Continuous**, **Motion Capture**, or **AEB** options.

Changing the metering option

The metering mode refers to the way in which a camera measures the quantity of light. The brightness and lighting of your photos will vary depending on the metering mode you select.

1 In Shooting mode, touch MENU → **Metering**.

2 Select an option, and then touch **OK**.



Icon	Description
	Multi: • Your camera divides the frame into several areas, and then measures the light intensity of each area. • Suitable for general photos.
	Spot: • Your camera measures only the light intensity of the very center of the frame. • If a subject is not in the center of the frame, your photo may be improperly exposed. • Suitable for a subject with backlighting.
	Center-weighted: • Your camera averages the meter reading of the entire frame with emphasis placed on the center. • Suitable for photos with subjects in the center of the frame.

Selecting a light source (White balance)

The color of your photo depends on the type and quality of the light source. If you want the color of your photo to be realistic, select a white balance setting that is appropriate for the lighting conditions, such as Auto WB, Daylight, Cloudy, or Tungsten.

AWB Auto WB

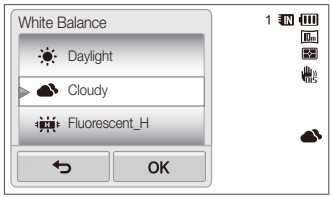
Daylight

Cloudy

Tungsten

1 In Shooting mode, touch MENU → **White Balance**.

2 Select an option, and then touch **OK**.



Icon	Description
	Auto WB: Automatically set the White Balance based on the lighting conditions.
	Daylight: For outdoor photos on a sunny day.
	Cloudy: For outdoor photos on a cloudy day or in shadows.
	Fluorescent_H: For shooting under a daylight fluorescent or 3-way fluorescent light.
	Fluorescent_L: For shooting under white fluorescent light.
	Tungsten: For shooting indoor photos under incandescent bulbs or halogen lamps.
	Custom Set: Use White Balance settings that you defined.

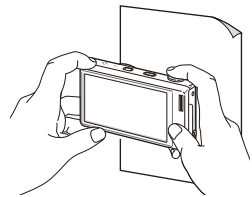
Defining your own White Balance

You can customize the White Balance by capturing a photo of a white surface, such as a piece of paper, under the lighting conditions in which you intend to capture a photo. The White Balance feature will help your camera reproduce the colors that are in the scene accurately in your photo.

1 In Shooting mode, touch MENU → **White Balance**.

2 Select **Custom Set**, and then touch **OK**.

3 Aim the lens at a piece of white paper, and then press [**Shutter**].

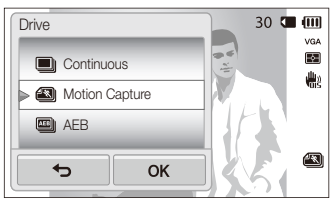


Using burst modes

It can be difficult to capture photos of fast-moving subjects or capture natural facial expressions and gestures of your subjects in photos. In these cases, select one of the burst modes to rapidly capture multiple photos.

1 In Shooting mode, touch MENU → **Drive**.

2 Select an option, and then touch **OK**.



Icon	Description
	Single: Capture a single photo.
	Continuous: • While you are pressing [**Shutter**], the camera continuously captures photos. • The maximum number of photos depends on the capacity of your memory card.
	Motion Capture: While you are pressing [**Shutter**], the camera captures VGA photos (6 photos per second; maximum of 30 photos).
	AEB: • Captures 3 consecutive photos, each with a different exposure: normal, underexposed, and overexposed. • Use a tripod to prevent blurry photos.

- You can use the flash, timer, ACB, and Smart Filter only when you select **Single**.
- When you select **Motion Capture**, your camera will set the resolution to VGA and set the ISO sensitivity to **Auto**.
- Depending on the Face Detection option you selected, some burst options may not be available.

Applying effects/Adjusting images

Applying Smart Filter effects

Apply various filter effects to your photos and videos to create unique images.

Miniature

Vignetting

Fish-eye

Sketch

1 In Shooting mode, touch MENU → **Smart Filter**.

2 Select a filter, and then touch **OK**.

Available filters in P Mode

Icon	Description
	Normal: No effect
	Miniature: Apply a tilt-shift effect to make the subject appear in miniature.
	Vignetting: Apply the retro-looking colors, high contrast, and strong vignette effect of Lomo cameras.
	Soft-Focus: Hide facial imperfections or apply dreamy effects.
	Old Film 1: Apply vintage film effect 1.
	Old Film 2: Apply vintage film effect 2.
	Half Tone Dot: Apply a halftone effect.
	Sketch: Apply a pen sketch effect.
	Fish-eye: Blacken the edges of the frame and distort objects to imitate the visual effect of a fisheye lens.
	Defog: Make a photo clearer.
	Classic: Apply a black and white effect.

Icon	Description
	Retro: Apply a sepia tone effect.
	Negative: Apply a negative film effect.
	Custom RGB: Customize a color value.

Available filters in SD Movie Recording modes

Icon	Description
	Normal: No effect
	Miniature: Apply a tilt-shift effect to make the subject appear in miniature.
	Vignetting: Apply the retro-looking colors, high contrast, and strong vignette effect of Lomo cameras.
	Half Tone Dot: Apply a halftone effect.
	Sketch: Apply a pen sketch effect.
	Fish-eye: Distort close objects to imitate the visual effect of a fisheye lens.
	Defog: Make image clearer.
	Classic: Apply a black and white effect.

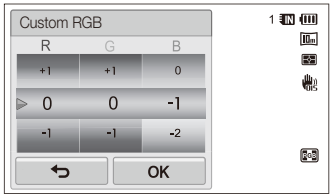
Icon	Description
	Retro: Apply a sepia tone effect.
	Negative: Apply a negative film effect.
	Custom RGB: Customize a color value.

Defining your own RGB tone

1 In Shooting mode, touch MENU → **Smart Filter**.

2 Select **Custom RGB**, and then touch **OK**.

3 Drag up or down to adjust the values of each color.
- The higher the value, the brighter the photo.
- The lower the value, the darker the photo.



4 Touch **OK** to save your changes.

- If you select **Miniature** when you are recording a video, the speed of the video will increase.
- If you select **Miniature** when you are recording a video, the camera will not record sound.
- If you select **Miniature**, **Vignetting**, **Half Tone Dot**, **Sketch**, **Fish-eye**, or **Defog** while recording a video, the recording speed will be set to FHD and the recording resolution will be set to less than **640**.
- If you set Smart Filter effects, you cannot use the Face Recognition options, ACB, burst options, Image Adjustment options, Intelli zoom, or Smart Touch AF.
- If you select **Sketch** when you capture a photo, the photo resolution will change to 5M and below.

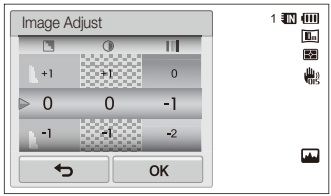
Adjusting your photos

Adjust the sharpness, saturation, or contrast of your photos.

1 In Shooting mode, touch MENU → **Image Adjust**.

2 Drag up or down to adjust each value.

- : Sharpness
- : Contrast
- : Saturation



3 Touch **OK** to save your changes.

Sharpness	Description
-	Soften the edges on your photos (suitable for editing the photos on your computer).
+	Sharpen the edges to improve the clarity of your photos. This may also increase the noise on your photos.

Contrast	Description
-	Decrease the color and brightness.
+	Increase the color and brightness.

Saturation	Description
-	Decrease the saturation.
+	Increase the saturation.

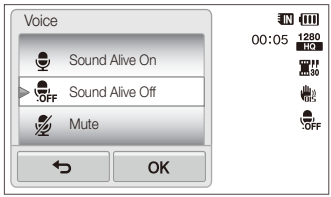
- Select 0 if you do not want to apply any effects (suitable for printing).
- If you set adjustment functions, you cannot use Smart Filter options.

Reducing the zoom sound

When you use the zoom while recording videos, the camera can record the sound of the zoom in the videos. Use the Sound Alive function to reduce the zoom noise.

1 In Shooting mode, touch MENU → **Voice**.

2 Select an option, and then touch **OK**.



Icon	Description
	Sound Alive On: Turn on the Sound Alive function.
	Sound Alive Off: Turn off the Sound Alive function.
	Mute: Do not record sounds.

- Do not block the microphone when you use the Sound Alive function.
- Recordings made with Sound Alive may differ from actual sounds.

Available shooting options by shooting mode

For details about shooting options, refer to "Shooting options".

	Easy Shot (photo)	Easy Shot (movie)	One touch shot	Timer Shot	Close-up Shot	Super Wide Shot	Night Shot	P Mode
Resolution	O	O	O	O	O	O	O	O
Quality	-	O	O	O	O	O	O	O
Timer	△	△	-	O	O	O	O	O
Flash	△	-	△	△	-	△	△	O
ISO sensitivity	-	-	-	-	-	-	-	O
Macro	-	-	-	-	△	-	-	O
Focus area	-	-	-	-	-	-	-	O
Face detection	-	-	-	-	-	-	-	O
EV	-	-	-	-	-	-	-	O
ACB	△	-	-	-	-	-	-	O
Metering	-	-	-	-	-	-	-	O
White balance	-	-	-	-	-	-	-	O
Drive	-	-	-	-	-	-	-	O
Smart filter	-	-	-	-	-	-	-	O
Image adjust	-	-	-	-	-	-	-	O
Sound Alive	-	O	-	-	-	-	-	-
Digital zoom	-	-	-	O	-	-	-	O
Intelli zoom	△	-	-	△	-	-	-	△
OIS	O	O	O	O	O	O	O	O
Voice memo	-	-	-	-	-	-	-	O

△ In these modes, some options are limited or a certain option is set by default. O The option is available in this mode.

	HD Movie Recording	SD Movie Recording	Beauty Shot	Object Highlight	Magic Frame shot	Smart Filter (photo)	Smart Filter (movie)	Palette Effect Recording
Resolution	-	-	O	△	-	O	△	O
Quality	O	O	O	O	O	O	-	O
Timer	△	△	O	O	O	O	△	△
Flash	-	-	△	-	△	△	-	-
ISO sensitivity	-	-	-	-	-	-	-	-
Macro	O	O	-	-	-	-	-	O
Focus area	-	-	-	-	-	-	-	-
Face detection	-	-	-	-	-	-	-	-
EV	O	O	-	-	-	-	-	-
ACB	-	-	-	-	-	-	-	-
Metering	O	O	-	-	-	-	-	-
White balance	O	O	-	-	-	-	-	-
Drive	-	-	-	-	-	-	-	-
Smart filter	-	△	-	-	-	△	△	-
Image adjust	-	-	-	-	-	-	-	-
Sound Alive	O	O	-	-	-	-	O	O
Digital zoom	-	-	-	-	-	-	-	-
Intelli zoom	-	-	-	-	-	-	-	-
OIS	O	O	O	O	O	O	O	O
Voice memo	-	-	-	-	-	-	-	-

△ In these modes, some options are limited or a certain option is set by default. O The option is available in this mode.

Playback/Editing

Learn how to play back photos, videos, or voice memos and edit photos or videos. Also, learn how to connect your camera to your computer, photo printer, TV, or HDTV.

Viewing photos or videos in Playback mode 77
- Starting Playback mode 77
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Editing a photo 89
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Transferring files to your Windows computer 95
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- Transferring files by connecting the camera as a removable disk 98
- Disconnecting the camera (for Windows XP) 99

Transferring files to your Mac computer 100

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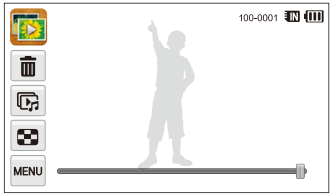
Viewing photos or videos in Playback mode

Learn how to play back photos, videos, or voice memos and how to manage files.

Starting Playback mode

View photos or play videos and voice memos stored in your camera.

1 Press [**Playback**].

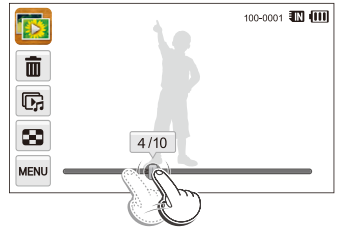


- The most recent file will be displayed.
- If the camera is off, it will turn on and display the most recent file.

To view files by category, touch on the Home screen. (p. 80)

2 Drag the image left or right to move to another file.

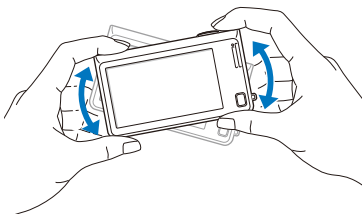
- To skip files quickly, tilt the camera to the direction you want to flip files. (p. 78)
- You can also touch and hold the left end or right end of the screen to skip files quickly.
- You can also drag the slider left or right to move to the previous or next file.



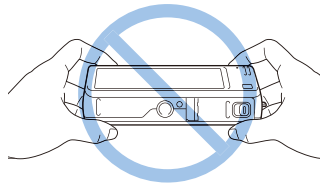
- If you want to view files stored in the internal memory, remove your memory card.
- The camera will not properly play back files of unsupported sizes or files that were captured with other cameras.

Viewing files with motion recognition

You can view files by tilting the camera in Playback mode.

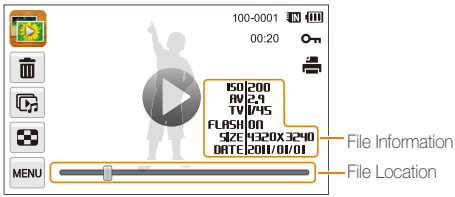


- Motion recognition may not work well if you hold the camera with the screen parallel to the ground.



- When you rotate the camera 90° or 180° while you view a photo, the camera will automatically change the orientation of the displayed photo. (p. 108)
- To deactivate motion recognition, touch MENU, and then touch the setting button next to **Gesture View**.

Display in Playback mode



Icon	Description
	Photo includes a voice memo
	Play videos (p. 86) or voice memos (p. 87)
100-0001	Folder name – File name
00:20	Video length
	Protected file
	Print order has been set (DPOF)
	Delete files (p. 83)
	Play a slide show (p. 85)
	View files as thumbnails (p. 81)

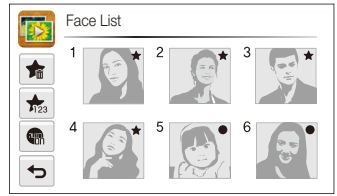
To display file information on the screen, touch MENU, and then touch the setting button next to **File Information**.

Ranking your favorite faces

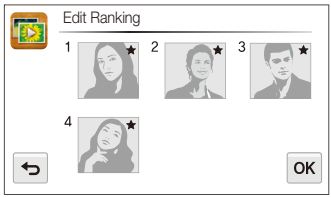
You can rank your favorite faces or delete them. The favorite face feature is available only when you insert a memory card into the camera.

1 In Playback mode, touch MENU → **Face List**.

- In Thumbnail view or Smart album, touch MENU → **Face List**.



2 To change the rank of a face, touch ★123 → **Yes**, and then drag the face to a new location.



3 Touch **OK** to save your changes.

- To delete a face from the list, touch ★, touch a face, and then touch **OK**.

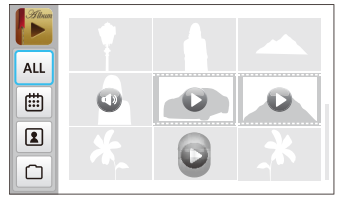
Touch AUTO to view only your favorite faces in the face list.

Viewing files in Smart album as thumbnails

View files by category, such as date, face, or file type.

1 On the Home screen, touch .

2 Touch **ALL** → a category option.



Icon	Description
ALL	View all files.
	View files by the date they were saved.
	View files by recognized faces and favorite faces.
	View files by the file type.

- It may take some time for the camera to open Smart album, change the category, or reorganize files.
- If you delete a category, all files in the category will be deleted.

Viewing files with the page flip effect

You can flip through files by dragging or flicking your finger across the screen. You can also apply a page flip effect to a slide show.

1 On the Home screen, touch .

2 Touch a theme.

3 Drag images to the left or right to move to the previous or next file.

Icon	Description
	Play a slide show. • Touch the screen to pause the slide show and adjust the volume or mute the sound. • Touch ⮌ to stop the slide show.
⮌	Return to the theme selection screen.

You can view only photos when you use the page flip effect.

Viewing files as thumbnails

Scan thumbnails of files.

In Playback mode, rotate [**Zoom**] to the left to view thumbnails (9 at a time). Rotate [**Zoom**] to the left once or twice more to display more thumbnails (16 or 36 at a time). Rotate [**Zoom**] to the right to return to the previous view.

Touch a file to display it in full screen view.

Icon	Description
	Delete files
	Photo includes a voice memo
	Video file
	Voice memo file

Drag the screen up or down to move to the previous or next page of thumbnails.

Protecting files

Protect your files to prevent accidental deletion.

1 In Playback mode, locate the file you want to protect, and then touch MENU.

2 Touch the setting button next to **Protect**.

You cannot delete or rotate a protected file.

Deleting files

Select files to delete in Playback mode.

Deleting a single file

You can select one file, and then delete it.

1 In Playback mode, locate the file you want to delete, and then touch 🗑.

2 When the pop-up message appears, touch **Yes**.

> You can also delete a file by touching MENU → **Delete** → **Delete** → **OK** → **Yes**.

Deleting multiple files

You can select multiple files, and then delete them at once.

1 On the Home screen, touch 🗑 → 🗑.
- In Thumbnail view or Smart album, touch 🗑.

2 Select the files you want to delete, and then touch 🗑.

3 When the pop-up message appears, touch **Yes**.

> When you sort files by category, deleting a category will delete all files in that category.

Deleting all files

You can select all files, and then delete them at once.

1 On the Home screen, touch 🗑 → 🗑 ALL → **Yes**.
- In Thumbnail view or Smart album, touch MENU → **Delete**.

2 Select **All**, and then touch **OK**.

3 When the pop-up message appears, touch **Yes**.

> You can also delete all files by touching MENU → **Delete** → **All** → **OK** → **Yes**.

Copying files to a memory card

Copy files from the internal memory to a memory card.

1 In Playback mode, touch MENU.
- In Thumbnail view or Smart album, touch MENU → **Copy to Card**.

2 Touch **Copy to Card**.

3 When the pop-up message appears, touch **Yes**.

Viewing photos

Enlarge part of a photo or view photos as a slide show.

Enlarging a photo

In Playback mode, rotate [**Zoom**] to the right to enlarge a portion of the photo. Rotate [**Zoom**] to the left to zoom out.

Drag the screen to see another part of the photo.

Icon	Description
	Delete the file.
	Crop the photo (the camera will save it as a new file).
	Return to the original view.
X2.1	Zoom ratio (The maximum zoom ratio differs depending on the photo resolution.)

When you view photos that were captured by another camera, the zoom ratio may differ.

Playing a slide show

Apply effects and audio to a slide show of your photos. The slide show function does not work for videos or voice memos.

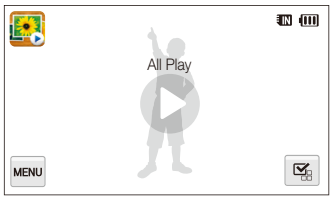
1 On the Home screen, touch .

2 Touch , and then select individual photos that you want to include in the slide show.

- Touch to select all.
- Touch to cancel your selection.
- You cannot select video files.
- You can select up to 2,000 files.

3 Touch **OK**.

4 Touch MENU, and then set a slide show effect.



* Default

Icon	Description
	Play Mode: Set whether or not to repeat the slide show. (**One Play***, **Repeat**)
	Interval: • Set the interval between photos. (**1 sec***, **3 sec**, **5 sec**, **10 sec**) • You must set the Effect option to to set the interval.
	Music: Set background audio. (**Off***, **Mist**, **Drops**, **Muse**, **Trip**, **Fall**)
	Effect: • Set a scene change effect between photos. (**Off***, **Calm**, **Shine**, **Relax**, **Lively**, **Sweet**) • Select to cancel effects. • When you use the Effect option, the interval between photos will be set to 1 second.

5 Touch to start the slide show.

- Touch the screen to pause the slide show.
- Touch to adjust the volume or mute the sound.
- Touch to stop the slide show.

Playing a video

In Playback mode, you can view a video, and then capture or trim parts of the playing video. You can save the captured or trimmed segments as new files.

1 In Playback mode, locate a video, and then touch ▶.

2 View the video.

Icon	Description
◀◀	Scan backward.
❚❚/▶	Pause or resume playback.
▶▶	Scan forward.
🔊	Adjust the volume or mute the sound.
↩	Return to Playback mode.

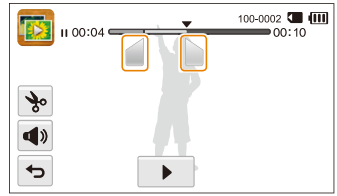
Trimming a video

1 While viewing a video, touch ❚❚ at the point where you want the trimming to begin.

2 Touch ✂ → ▶.

3 Touch ❚❚ at the point where you want the trimming to end.

- You can also adjust the scene to be cropped by dragging the handles that appear on the progress bar.



4 Touch ✂.

5 When the pop-up message appears, touch **Yes**.

- The original video should be at least 10 seconds long.
- The camera will save the edited video as a new file.

Capturing an image from video

1 While viewing a video, touch ❚❚ at the point where you want to capture an image.

2 Touch .

3 When the pop-up message appears, touch **Yes**.

- The resolution of the captured image will be the same as the original video.
- The captured image is saved as a new file.

Playing a voice memo

Listening to a voice memo

1 In Playback mode, locate a voice memo file, and then touch ▶.

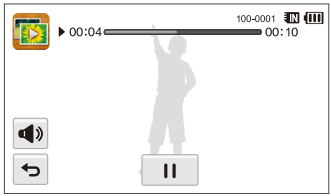
2 Listen to the voice memo.

Icon	Description
◀◀	Scan backward.
❚❚/▶	Pause or resume playback.
▶▶	Scan forward.
🔊	Adjust the volume or mute the sound.
⮌	Return to Playback mode.

Playing voice memos that are attached to photos

1 In Playback mode, locate a photo that includes a voice memo, and then touch .

2 Listen to a voice memo.



Icon	Description
	Pause or resume playback.
	Adjust the volume or mute the sound.
	Return to Playback mode.

Editing a photo

Learn how to edit photos.

- The camera will save edited photos as new files.
- When you edit photos, the camera will automatically convert them to a lower resolution. Photos that you rotate or resize manually are not automatically converted to a lower resolution.

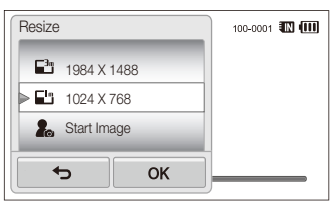
Resizing photos

Change the size of a photo and save it as a new file. You can also select a photo to be displayed when the camera turns on.

1 In Playback mode, locate a photo, and then touch MENU.

2 Touch **Resize**, and then select a size option.

- Select **Start Image** to save the photo as a start image. (p. 105)



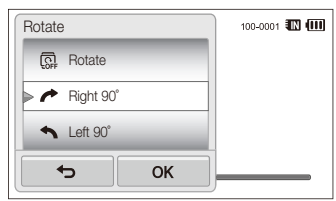
3 Touch **OK** to save.

Available resize options differ depending on the original size of the photo.

Rotating a photo

1 In Playback mode, locate a photo, and then touch MENU.

2 Touch **Rotate**, and then select a rotate option.



3 Touch **OK** to save.

The camera will overwrite the original file.

Applying Smart Filter effects

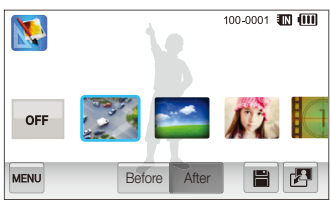
Apply special effects to your photos.

1 On the Home screen, touch .
- The most recent file will be displayed.

2 Touch → a photo.

3 Touch MENU → **Smart Filter**.

4 Select a filter.
- To see available filter options, refer to page 69.
- To view the original photo, touch **Before**.
- To view the photo with the filter effect, touch **After**.



5 Touch to save your changes.

Adjusting your photos

Learn how to adjust the brightness, contrast, or saturation and how to correct the red-eye effect. If the center of a photo is dark, you can adjust it to be brighter. The camera will save an edited photo as a new file, but may convert it to a lower resolution.

- You can adjust brightness, contrast, and saturation and apply Smart Filter effects at the same time.
- You cannot apply the ACB, Face Retouch, and Red-eye Fix effects at the same time.

Adjusting brightness, contrast, or saturation

1 On the Home screen, touch .
- The most recent file will be displayed.

2 Touch → a photo.

3 Touch MENU → an adjusting option.

Icon	Description
	Brightness
	Contrast
	Saturation

4 Drag the slider left or right or touch the sample photos to adjust the option.
- To view the original photo, touch **Before**.
- To view the adjusted photo, touch **After**.

5 Touch to save your changes.

Adjusting dark subjects (ACB)

1 On the Home screen, touch .
- The most recent file will be displayed.

2 Touch → a photo.

3 Touch MENU → **ACB**.
- To view the original photo, touch **Before**.
- To view the adjusted photo, touch **After**.

4 Touch to save your changes.

Retouching faces

1 On the Home screen, touch .
- The most recent file will be displayed.

2 Touch → a photo.

3 Touch MENU → **Face Retouch**.

4 Drag the slider to the left (darker) or right (lighter) or touch the sample photos to adjust the skin tone.
- As the slider moves to the right, the skin tone becomes brighter.
- To view the original photo, touch **Before**.
- To view the adjusted photo, touch **After**.

5 Touch to save your changes.

Removing red-eye

1 On the Home screen, touch .
   - The most recent file will be displayed.

2 Touch → a photo.

3 Touch MENU → **Red-eye Fix**.
   - To view the original photo, touch **Before**.
   - To view the adjusted photo, touch **After**.

4 Touch to save your changes.

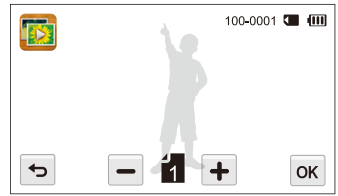
Creating a print order (DPOF)

Select photos to print and save print options in the Digital Print Order Format (DPOF). This information is saved in the MISC folder on your memory card for convenient printing on DPOF-compatible printers.

1 In Playback mode, locate a photo, and then touch MENU.

2 Touch **DPOF**.

3 Touch +/− to select the number of copies, and then touch **OK**.



- You can take the memory card to a print shop that supports DPOF (Digital Print Order Format) or you can print photos directly through a DPOF-compatible printer at home.
- Photos with dimensions that are wider than the paper may be cut off on the left and right edges. Ensure that your photo dimensions are compatible with the paper you select.
- You cannot set DPOF options for photos stored in the internal memory.

Viewing files on a TV or HDTV

Play back photos or videos by connecting your camera to a TV with the A/V cable.

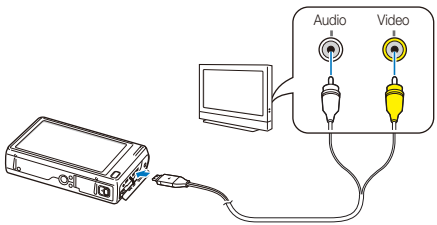
1 On the Home screen, touch .

2 Touch **Connectivity** → **Video Out**.

3 Select the appropriate video signal output for your country or region. (p. 106)

4 Turn off your camera and TV.

5 Connect your camera to your TV with the A/V cable.



6 Turn on your TV, and then select a video output mode with the TV remote control.

7 Turn on your camera.

- The camera automatically enters into Playback mode when you connect it to a TV.

8 View photos or play videos using the touch screen on your camera.

- Depending on the TV model, you may see some digital noise or part of an image may not appear.
- Images may not be centered on the TV screen depending on your TV settings.

Viewing files on an HDTV

You can view high-quality and uncompressed photos or videos on an HDTV using the optional HDMI cable. HDMI (High Definition Multimedia Interface) is supported by most HDTVs. For details, see the HDMI Kit manual.

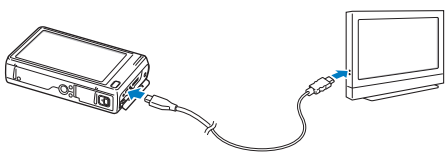
1 On the Home screen, touch .

2 Touch **Connectivity** → **HDMI Size**.

3 Select an HDMI resolution. (p. 107)

4 Turn off your camera and HDTV.

5 Connect your camera to your HDTV using the optional HDMI cable.



6 Turn on your camera.

- If you have an Anynet+ compatible Samsung HDTV, the HDTV will turn on automatically and display the camera screen.
- If you turn Anynet+ off, the HDTV does not turn on automatically.

7 View files using a remote control of your camera or HDTV.

- If your HDTV supports the Anynet+(CEC) profile, turn Anynet+ on in the camra's settings menu (p. 106) to control the camera and TV with the TV's remote control.
- Anynet+ lets you control all connected Samsung A/V devices with the TV remote control.
- The time it takes for the camera to connect to your HDTV may vary with the type of microSD or microSDHC card you use. A faster microSD or microSDHC card will not necessarily result in a faster HDMI transfer, because the main function of the card is to improve transfer rate during shooting.

Transferring files to your Windows computer

Transfer files to your Windows computer, edit them with Intelli-studio, and upload them to the web.

Requirements

Item	Requirements
CPU	Intel Pentium 4, 3.2 GHz or higher/AMD Athlon™ FX 2.6 GHz or higher
RAM	Minimum 512 MB RAM (1 GB or more recommended)
OS	Windows XP SP2, Windows Vista, or Windows 7 (32-bit editions)
Hard disk capacity	250 MB or more (1 GB and above recommended)
Others	• CD-ROM drive • 1024 X 768 pixels, 16-bit color display compatible monitor (1280 X 1024 pixels, 32-bit color display recommended) • USB 2.0 port • nVIDIA Geforce 7600GT or higher/ATI X1600 series or higher • Microsoft DirectX 9.0c or higher

* The programs may not work properly on 64-bit editions of Windows XP, Windows Vista, and Windows 7.

- The requirements are recommendations only. Intelli-studio may not work properly even when the computer meets the requirements, depending on the condition of your computer.
- If your computer does not meet the requirements, videos may not play correctly or it may take longer to edit videos.
- Install DirectX 9.0c or above before you use the program.
- Your computer must be running Windows XP, Windows Vista, or Windows 7 for you to connect the camera as a removable disk. (See p. 98 and p. 100.)

The manufacturer is not responsible for any damage that results from using an unqualified computer such as a computer you assembled yourself.

Transferring files with Intelli-studio

Intelli-studio will start automatically when you connect the camera to your computer with the USB cable.

The battery will charge while the camera is connected to a computer with the USB cable.

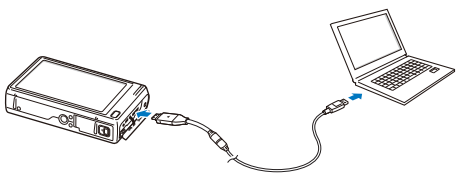
1 On the Home screen, touch .

2 Touch **Connectivity**, and then turn on **PC Software** by touching the setting button.

3 Turn off the camera.

4 Connect the camera to your computer with the USB cable.

You must plug the end of the cable with the indicator light (▲) into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.



5 Turn on the camera.

- The computer recognizes the camera automatically and Intelli-studio launches automatically.

If you set the USB option to **Select Mode**, select **Computer** in the pop-up window.

6 Select a destination folder on your computer, and then select **Yes**.

- New files stored on the camera will automatically transfer to the selected folder.
- If your camera has no new files, the pop-up window for saving new files will not appear.

For Windows Vista and Windows 7, select **Run iStudio.exe** from the Auto Play window to start Intelli-studio.

Using Intelli-studio

Intelli-studio is a built-in program that allows you to play back and edit files. For details, select **Help** → **Help** from the program toolbar.

- To enjoy more features, such as creating slide shows with templates, install the full version of Intelli-studio by selecting **Web Support** → **Update Intelli-studio** → **Start Update** from the program toolbar.
- You can update the firmware of your camera by selecting **Web Support** → **Upgrade firmware for the connected device** from the program toolbar.
- If you install Intelli-studio on your computer, the program will launch more quickly. To install the program, select **Tool** → **Install Intelli-studio on PC**.
- You cannot edit files directly on the camera. Transfer files to a folder on your computer before editing.
- Intelli-studio supports the following formats:
  - Videos: MP4 (Video: H.264, Audio: AAC), WMV (WMV 7/8/9), AVI (MJPEG)
  - Photos: JPG, GIF, BMP, PNG, TIFF

No.	Description
1	Open menus.
2	Display files in the selected folder.
3	Switch to the Photo edit mode.
4	Switch to the Video edit mode.
5	Switch to the Sharing mode. (to send files by email or upload files to websites, such as Flickr or YouTube)
6	Enlarge or reduce the thumbnails in the list.
7	Select a file type.
8	View files in the selected folder on your computer.
9	Show or hide files on the connected camera.
10	View files in the selected folder on the camera.
11	View files as thumbnails or on a map.
12	Browse folders stored on the camera.
13	Browse folders stored on your computer.
14	Move to the previous or next folder.
15	Print files, view files on a map, store files in My Folder, or register faces.

Transferring files by connecting the camera as a removable disk

Connect the camera to your computer as a removable disk.

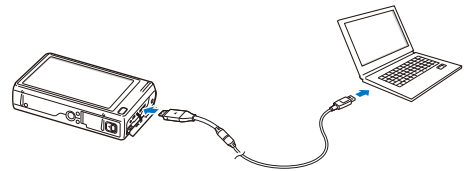
1 On the Home screen, touch .

2 Touch **Connectivity**, and then turn off **PC Software** by touching the setting button.

3 Turn off the camera.

4 Connect the camera to your computer with the USB cable.

> You must plug the end of the cable with the indicator light (▲) into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.



5 Turn on the camera.
- The computer recognizes the camera automatically.

If you set the USB option to **Select Mode**, select **Computer** in the pop-up window.

6 On your computer, select **My Computer** → **Removable Disk** → **DCIM** → **100PHOTO**.

7 Drag or save files to your computer.

Disconnecting the camera (for Windows XP)

For Windows Vista and Windows 7, the methods for disconnecting the camera are similar.

1 If the status lamp on your camera is blinking, wait until it stops.

2 Click on the tool bar at the bottom right of your computer screen.

3 Click the pop-up message.

4 Click the message box indicating safely removed.

5 Remove the USB cable.

The camera may not disconnect safely while Intelli-studio is running. End the program before disconnecting the camera.

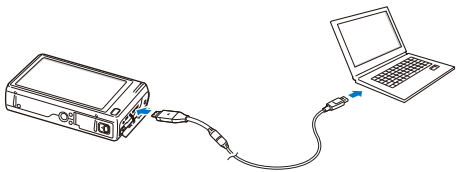
Transferring files to your Mac computer

When you connect the camera to a Macintosh computer, the computer will automatically recognize the device. You can transfer files directly from the camera to the computer without installing any programs.

Mac OS 10.4 or later is supported.

1 Connect your camera to a Macintosh computer with the USB cable.

You must plug the end of the cable with the indicator light (▲) into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.



2 Turn on the camera.

- The computer recognizes the camera automatically and displays a removable disk icon.

If you set the USB option to **Select Mode**, select **Computer** in the pop-up window.

3 Double-click the removable disk icon.

4 Drag or save files to your computer.

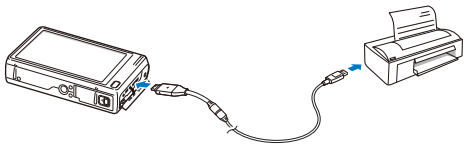
Printing photos with a PictBridge photo printer

Print photos with a PictBridge-compatible printer by connecting your camera directly to the printer.

1 On the Home screen, touch .

2 Touch **Connectivity** → **USB** → **Printer**.

3 Turn on the printer, and then connect your camera to the printer with the USB cable.

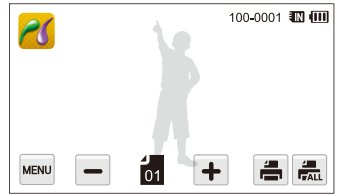


4 If the camera is off, press [**POWER**] or [**Playback**] to turn it on.
- The printer recognizes the camera automatically.

5 Select a file to print.

6 Touch **+**/**—** to select the number of copies.
- To set printer options, touch MENU. (p. 102)

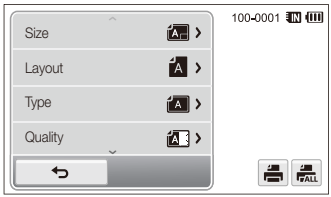
7 Touch to print.
- Touch ALL to print all photos.



8 When the pop-up window appears, touch **Yes** to begin printing.
- To cancel printing, touch **Cancel** on the pop-up window.

Configuring print settings

Press MENU to configure print settings.



Icon	Description
	Size: Set the print size.
	Layout: Set the number of photos to be printed on a single sheet of paper.
	Type: Set the type of paper.
	Quality: Set the print quality.
	Date: Set to print the date.
	File Name: Set to print the file name.
	Reset: Reset settings to their default values.

Some options may not be supported by some printers.

Settings

Refer to options to configure your camera's settings.

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- Accessing the settings menu 104
- Sound 105
- Display 105
- Connectivity 106
- General 107

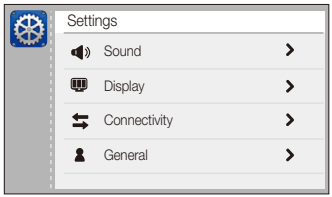
Settings menu

Learn to configure your camera's settings.

Accessing the settings menu

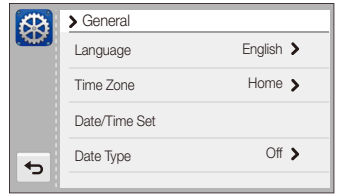
1 On the Home screen, touch .

2 Touch a menu.

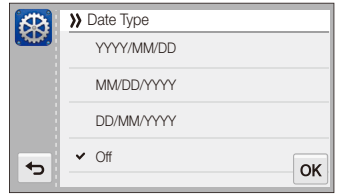


Icon	Description
	Sound: Set various camera sounds and the volume. (p. 105)
	Display: Customize the display settings. (p. 105)
	Connectivity: Set the connection options. (p. 106)
	General: Change the settings for the camera system such as memory format and default file name. (p. 107)

3 Touch an item.



4 Select an option, and then touch **OK**.



5 Touch to return to the previous screen.

Sound

* Default

Item	Description
Volume	Set the volume of any sound. (**Off**, **Low**, **Medium***, **High**)
Beep Sound	Set to emit sounds when you touch the screen or switch modes. (**Off**, **On***)
Shutter Sound	Set the sound the camera emits when you press the shutter button. (**Off**, **1***, **2**, **3**)
Start Sound	Set the sound the camera emits when you turn on your camera. (**Off***, **1**, **2**, **3**)
AF Sound	Set to emit a sound when you half-press the shutter button. (**Off**, **On***)

Display

* Default

Item	Description
Start Image	Set a start image to display when the camera turns on. • **Off***: Display no start image. • **Logo**: Display a default image stored in the internal memory. • **User Image**: Display a custom image. (p. 89) • The camera will save only one User Image in the internal memory at a time. • If you select a new photo as a User Image or reset your camera, the camera will delete the current image.
Guide Line	Set a grid to help you compose a scene. (**2 X 2***, **3 X 3**, **X**, **+**)
Display Brightness	Adjust the brightness of the screen. (**Auto**, **Dark**, **Normal**, **Bright***) **Normal** is fixed in Playback mode even if you have selected **Auto**.

* Default

Item	Description
Quick View	Set the duration for reviewing a captured image before returning to the Shooting mode. (**Off**, **0.5 sec***, **1 sec**, **3 sec**)
Power Save	If you perform no operations for 30 seconds, the camera automatically switches to Power save mode. (**Off***, **On**) • In Power save mode, press any button other than [**POWER**] to resume using the camera. • Even if you do not set the Power save mode, the screen will dim 30 seconds after the last operation to save power.

Connectivity

* Default

Item	Description
Video Out	Set the video signal output for your region. • **NTSC***: USA, Canada, Japan, Korea, Taiwan, Mexico • **PAL** (supports only BDGHI): Australia, Austria, Belgium, China, Denmark, England, Finland, Germany, Italy, Kuwait, Malaysia, Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Switzerland, Thailand
Anynet+ (HDMI-CEC)	Set whether or not to control the camera with a TV remote control when you connect it to an HDTV that supports the Anynet+(CEC) profile. • **Off**: View files without using an HDTV remote control. • **On***: Control the camera with an HDTV remote control.

* Default

Item	Description
HDMI Size	Set the resolution of photos when the camera plays back files on an HDTV via the HDMI cable. (NTSC: **1080i***, **720p**, **480p**/PAL: **1080i***, **720p**, **576p**) • If the HDTV does not support the selected resolution, the HDTV automatically selects the next lower resolution. • If you select **480p** or **576p**, the playback menus and Smart Album will not be available when you connect the camera to a TV.
USB	Select the mode to use when you connect the camera to a computer or printer with a USB cable. • **Computer***: Connect your camera to a computer for transferring files. • **Printer**: Connect your camera to a printer for printing files. • **Select Mode**: Manually select the USB mode when you connect your camera to a device.
PC Software	Set Intelli-studio to launch automatically when you connect your camera to your computer. (**Off**, **On***)

General

* Default

Item	Description
Language	Set a language for the display text.
Time Zone	Set the time zone for your location. When you travel to another country, touch **Visit**, and then touch the appropriate time zone.
Date/Time Set	Set the date and time.
Date Type	Set a date format. (**YYYY/MM/DD**, **MM/DD/YYYY**, **DD/MM/YYYY**, **Off***)

* Default

Item	Description
File No.	Specify how to name files. • **Reset**: Set the file number to start from 0001 when you insert a new memory card, format a memory card, or delete all files. • **Series***: Set the file number to resume from the previous file number when you insert a new memory card, format a memory card, or delete all files. • The default name of the first folder is 100PHOTO and the default name of the first file is SAM_0001. • The file number increases one at a time from SAM_0001 to SAM_9999. • The folder number increases one at a time from 100PHOTO to 999PHOTO. • The maximum number of files that can be stored in one folder is 9,999. • The camera defines file names according to the Design rule for Camera File system (DCF) standard. If you intentionally change file names, the camera may not play back the files.
Auto Rotate	Set to automatically rotate photos as you rotate the camera. (**Off**, **On***)

* Default

Item	Description
Imprint	Set to display the date and time on captured photos. (**Off***, **Date**, **Date & Time**) • The date and time will be displayed on the bottom right corner of the photo. • Some printer models may not print the date and time properly.
Auto Power Off	Set the camera to automatically turn off when you perform no operations for a specified period. (**Off**, **1 min**, **3 min***, **5 min**, **10 min**) • Your settings will not change when you replace the battery. • The camera will not automatically turn off when the camera is connected to a computer or printer, when you are playing a slide show or videos, and when you are recording a voice memo.
AF Lamp	Set a light to automatically turn on in dark places to help the camera focus. (**Off**, **On***)

* Default

Item	Description
Format	Format the internal memory and the memory card (formatting will delete all files, including protected files). (**Yes**, **No**) Errors can occur if you use a memory card formatted by another brand of camera, a memory card reader, or a computer. Please format memory cards in the camera before using them to capture photos.
Reset	Reset menus and shooting options (date and time, language, and video output settings will not be reset). (**Yes**, **No**) You can also reset settings by touching on the Home screen.

Appendixes

Get information about error messages, specifications, and maintenance.

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Error messages

When the following error messages appear, try these remedies.

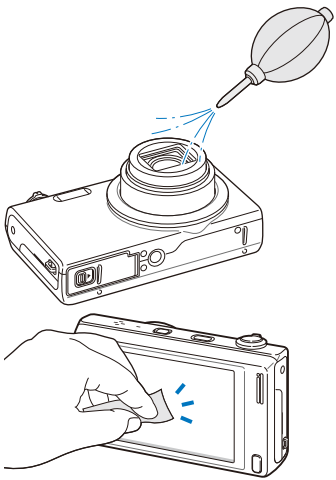
Error message	Suggested remedies
Card Error	• Turn off your camera, and then turn it on again. • Remove your memory card, and then insert it again. • Format your memory card.
Card not supported.	The inserted memory card is not supported by your camera. Insert a microSD or microSDHC memory card.
DCF Full Error	File names do not match the DCF standard. Transfer the files on the memory card to your computer, and then format the card.
File Error	Delete the damaged file or contact a service center.
File system not supported.	Your camera does not support the FAT file structure of the inserted memory card. Format the memory card on the camera.
Low Battery	Insert a charged battery or recharge the battery.
Memory Full	Delete unnecessary files or insert a new memory card.
No Image File	Capture photos or insert a memory card that contains some photos.

Camera maintenance

Cleaning your camera

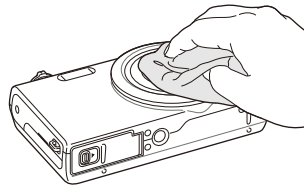
Camera lens and touch screen

Use a blower brush to remove dust and wipe the lens gently with a soft cloth. If any dust remains, apply lens cleaning liquid to a piece of lens cleaning paper and wipe gently.



Camera body

Wipe gently with a soft, dry cloth.



- Never use benzene, thinners, or alcohol to clean the camera. These solutions can damage the camera or cause it to malfunction.
- Do not press on the lens cover or use a blower brush on the lens cover.

Using or storing the camera

Inappropriate places to use or store the camera

- Avoid exposing the camera to very cold or very hot temperatures.
- Avoid using your camera in areas with extremely high humidity, or where the humidity changes drastically.
- Avoid exposing the camera to direct sunlight and storing it in hot, poorly-ventilated areas, such as in a car during summertime.
- Protect your camera and the display from impact, rough handling, and excessive vibration to avoid serious damage.
- Avoid using or storing your camera in dusty, dirty, humid, or poorly-ventilated areas to prevent damage to moving parts and internal components.
- Do not use your camera near fuels, combustibles, or flammable chemicals. Do not store or carry flammable liquids, gases, or explosive materials in the same compartment as the camera or its accessories.
- Do not store the camera where there are mothballs.

Using on beaches or shores

- Protect your camera from sand and dirt when you use it on beaches or in other similar areas.
- Your camera is not waterproof. Do not handle the battery, adapter, or memory card with wet hands. Operating the camera with wet hands may cause damage to your camera.

Storing for extended period of time

- When you store the camera for an extended period, place it in a sealed container with an absorbent material, such as silica gel.
- Remove the batteries from your camera when storing it for an extended period. Installed batteries may leak or corrode over time and cause serious damage to your camera.
- Over time, unused batteries will discharge and must be recharged before use.

Using the camera with caution in humid environments

When you transfer the camera from a cold environment to a warm one, condensation can form on the lens or internal components of the camera. In this situation, turn off the camera and wait for at least 1 hour. If condensation forms on the memory card, remove the memory card from the camera and wait until all moisture has evaporated before reinserting it.

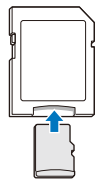
Other cautions

- Do not swing your camera by the strap. This may cause injury to yourself or others or damage to your camera.
- Do not paint your camera, as paint can clog moving parts and prevent proper operation.
- Turn off the camera while not in use.
- Your camera consists of delicate parts. Avoid impacts to the camera.
- Protect the display from external force by keeping it in the case when not in use. Protect the camera from scratches by keeping it away from sand, sharp implements, or loose change.
- Do not expose the lens to direct sunlight, as this may discolor the image sensor or cause it to malfunction.
- Protect your lens from fingerprints and scratches. Clean your lens with a soft, clean, debris-free lens cloth.
- The camera may turn off if subjected to a sudden impact. This is to protect the memory card. Turn on the camera to use it again.
- While you use the camera, it may heat up. This is normal and should not affect your camera's lifespan or performance.
- When you use the camera in low temperatures, it may take some time to turn on, the screen color may be changed temporarily, or after-images may appear. These conditions are not malfunctions and they will correct themselves when the camera is returned to normal temperatures.
- Paint or metal on the outside of the camera may cause allergies, itchy skin, eczema, or swelling for people with sensitive skin. If you experience any of these symptoms, stop using the camera immediately and consult a doctor.
- Do not insert foreign objects into any of your camera's compartments, slots, or access points. Damage due to improper use may not be covered by your warranty.
- Do not allow unqualified personnel to service the camera or attempt to service the camera yourself. Any damage that results from unqualified service is not covered by your warranty.

About memory cards

Supported memory cards

Your camera supports microSD (Secure Digital) or microSDHC (Secure Digital High Capacity) memory cards.



To read data with a PC or memory card reader, insert the memory card into a memory card adapter.

Memory card capacity

The memory capacity may differ from the capacities listed below depending on the scenes you shoot or the shooting conditions. These capacities are based on a 1 GB microSD card:

	Size	Super Fine	Fine	Normal	30 FPS	15 FPS
Photos	14M	122	240	353	-	-
	12M	137	267	391	-	-
	11M	163	320	471	-	-
	10M	166	323	469	-	-
	5M	319	607	858	-	-
	3M	522	954	1,336	-	-
	2M	742	1,336	1,878	-	-
	1M	1,582	2,505	3,006	-	-
* Videos	1280 HQ	-	-	-	Approx. 13' 08"	Approx. 22' 57"
	1280	-	-	-	Approx. 14' 55"	Approx. 25' 54"
	640	-	-	-	Approx. 34' 55"	Approx. 65' 40"
	320	-	-	-	Approx. 134' 34"	Approx. 231' 14"

* Available recording time may vary if you use the zoom. Several videos were recorded in succession to determine the total recording time.

Cautions when using memory cards

- Insert a memory card in the correct direction. Inserting a memory card in the wrong direction may damage your camera and memory card.
- Do not use memory cards that have been formatted by other cameras or by a computer. Reformat the memory card with your camera.
- Turn off the camera when you insert or remove the memory card.
- Do not remove the memory card or turn off your camera while the lamp is blinking, as this may damage your data.
- When the lifespan of a memory card has expired, you cannot store any more photos on the card. Use a new memory card.
- Do not bend, drop, or subject memory cards with heavy impact or pressure.
- Avoid using or storing memory cards near strong magnetic fields.
- Avoid using or keeping memory cards in areas with high temperature, high humidity, or corrosive substances.
- Prevent memory cards from making contact with liquids, dirt, or foreign substances. If dirty, wipe the memory card clean with a soft cloth before you insert the memory card in your camera.
- Do not allow liquids, dirt, or foreign substances to come in contact with memory cards or the memory card slot. Doing so may cause memory cards or the camera to malfunction.

- When you carry a memory card, use a case to protect the card from electrostatic discharges.
- Transfer important data to other media, such as a hard disk, CD, or DVD.
- When you use the camera for an extended period, the memory card may become warm. This is normal and does not indicate a malfunction.

The manufacturer is not responsible for any loss of data.

About the battery

Use only Samsung-approved batteries.

Battery specifications

Specification	Description
Model	BP85A
Type	Lithium-ion battery
Cell capacity	850 mAh
Voltage	3.7 V
Charging time* (when the camera is switched off)	Approximately 180 min

* Charging the battery by connecting it to a computer may take longer.

Battery life

Average shooting time / Number of photos		Test conditions (when the battery is fully charged)
Photos	Approximately 90 min/ Approximately 180 photos	This is measured under the following conditions: in P Mode, in the darkness, at 10m resolution, on Fine quality, with OIS on. 1. Set the flash option to **Fill in**, take a single shot, and zoom in or out. 2. Set the flash option to **Off**, take a single shot, and zoom in or out. 3. Perform steps 1 and 2 for 30 seconds and repeat for 5 minutes. Then turn off the camera for 1 minute. 4. Repeat steps 1 to 3.
Videos	Approximately 80 min	Record videos at 1280 X 720 HQ resolution and 30 FPS.

- The figures above are measured using Samsung's standards. Your reslults may differ, depending on your actual usage.
- Several videos were recorded in succession to determine the total recording time.

Low battery message

When the battery has fully discharged, the battery icon will turn red and the "**Low Battery**" message will appear.

Notes about using the battery

- Avoid exposing batteries or memory cards to very cold or very hot temperatures (below 0 ºC/32 ºF or above 40 ºC/104 ºF). Extreme temperatures can reduce the charging capacity of your batteries and can cause memory cards to malfunction.
- When you use the camera for an extended period, the area around the battery chamber may become warm. This does not affect the normal use of the camera.
- Do not pull the power supply cord to disconnect the plug from the power outlet, as this may cause a fire or electric shock.
- In temperatures below 0 ºC/32 ºF, battery capacity and battery life may decrease.
- Battery capacity may decrease in low temperatures but will return to normal in milder temperatures.

Cautions about using the battery

Protect batteries, chargers, and memory cards from damage

Prevent batteries from making contact with metal objects, as this can create a connection between the + and – terminals of your battery and lead to temporary or permanent battery damage and may cause a fire or electric shock.

Notes about charging the battery

- If the indicator light is off, make sure that the battery is inserted correctly.
- If the camera is on while battery is charging, the battery may not fully charge. Turn off the camera before charging the battery.
- Do not use your camera when you charge the battery. This may cause a fire or electric shock.
- Do not pull the power supply cord to disconnect the plug from the power outlet, as this may cause a fire or electric shock.
- Let the battery charge for at least 10 minutes before turning on the camera.
- If you connect the camera to an external power source while the battery is depleted, using some high energy-consuming functions will cause the camera to turn off. To use the camera normally, recharge the battery.

- Using the flash or recording videos depletes the battery quickly. Charge the battery until the indicator light turns green.
- If the indicator light blinks in orange or does not illuminate, reconnect the cable, or remove the battery and insert it again.
- If you charge the battery when the cable is overheated or the temperature is too high, the indicator light may turn orange. Charging will start when the battery cools down.
- Overcharging batteries may shorten battery life. After charging is finished, disconnect the cable from your camera.
- Do not bend or place heavy objects on the AC cable. Doing so may damage the cable.

Notes about charging with a computer connected

- Use only the provided USB cable.
- The battery may not charge when:
  - you use a USB hub
  - other USB devices are connected to your computer
  - you connect the cable to the port on the front side of your computer
  - the USB port of your computer does not support the power output standard (5 V, 500 mA)

Handling and disposing of batteries and chargers with care

- Never dispose of batteries in a fire. Follow all local regulations when you dispose of used batteries.
- Never place batteries or cameras on or in heating devices, such as microwave ovens, stoves, or radiators. Batteries may explode when they are overheated.

Personal injury or death can occur if the battery is handled carelessly or improperly. For your safety, follow these instructions for proper battery handling:

- The battery can ignite or explode if not handled properly. If you notice any deformities, cracks, or other abnormalities in the battery, immediately discontinue use of the battery and contact a service center.
- Use only authentic, manufacturer-recommend battery chargers and adapters and charge the battery only by the methods described in this user manual.
- Do not place the battery near heating devices or expose it to excessively warm environments, such as the inside of an enclosed car in the summertime.
- Do not place the battery in a microwave oven.
- Avoid storing or using the battery in hot, humid places, such as spas or shower enclosures.
- Do not rest the device on flammable surfaces, such as bedding, carpets, or electric blankets for a prolonged period.
- When the device is switched on, do not leave it in any confined space for a prolonged period.
- Do not allow battery terminals to come in contact with metallic objects, such as necklaces, coins, keys, or watches.
- Use only authentic, manufacturer-recommended, Lithium-ion replacement batteries.
- Do not disassemble the battery or puncture it with any sharp object.
- Avoid exposing the battery to high pressure or crushing forces.
- Avoid exposing the battery to major impacts, such as dropping it from high places.
- Do not expose the battery to temperatures of 60 °C (140 °F) or above.
- Do not allow the battery to come in contact with moisture or liquids.
- Do not expose the battery to sources of excessive heat such as direct sunshine, fire or the like.

Disposal guidelines

- Dispose of the battery with care.
- Do not dispose of the battery in a fire.
- Disposal regulations may differ by country or region. Dispose of the battery in accordance with all local and federal regulations.

Guidelines for charging the battery

Charge the battery only by the method described in this user manual. The battery can ignite or explode if not charged properly.

Before contacting a service center

If you are having trouble with your camera, try these troubleshooting procedures before you contact a service center. If you have attempted the suggested remedy and are still having problems with your device, contact your local dealer or service center.

When you leave your camera at a service center, be sure to also leave the other components that may have contributed to the malfunction, such as the memory card and battery.

Situation	Suggested remedies
Cannot turn on the camera	• Ensure that the battery is inserted. • Ensure that the battery is inserted correctly. (p. 16) • Charge the battery.
The power turns off suddenly	• Charge the battery. • Your camera may be in Power save mode. (p. 108) • The camera may turn off to prevent the memory card from being damaged due to an impact. Turn on your camera again.
The camera is losing battery power quickly	• The battery may lose power more quickly in low temperatures (below 0 ºC/32 ºF). Keep the battery warm by putting it into your pocket. • Using the flash or recording videos depletes the battery quickly. Recharge if needed. • Batteries are consumable parts that must be replaced over time. Get a new battery if the battery life is diminishing quickly.

Situation	Suggested remedies
Cannot capture photos	• There is no space on the memory card. Delete unnecessary files or insert a new card. • Format the memory card. • The memory card is defective. Get a new memory card. • Make sure that the camera is switched on. • Charge the battery. • Make sure that the battery is inserted correctly.
The camera freezes	Remove the battery and insert it again.
The camera heats up	While you use the camera, it may heat up. This is normal and should not affect your camera's lifespan or performance.
The flash does not work	• The flash option may be set to off. (p. 53) • You cannot use the flash in some modes.

Situation	Suggested remedies
The flash fires unexpectedly	The flash may fire due to static electricity. The camera is not malfunctioning.
The date and time are incorrect	Set the date and time in the display settings. (p. 107)
The touch screen or buttons do not work	Remove the battery and insert it again.
The camera screen responds poorly	If you use your camera at very low temperatures, it may cause the camera screen to malfunction or discolor. For better performance of your camera screen, use your camera in moderate temperatures.
The memory card has an error	• Turn off your camera and then turn it on again. • Remove your memory card and insert it again. • Format your memory card. See “Cautions when using memory cards” for more detail. (p. 115)
Cannot play back files	If you change the name of a file, your camera may not play the file (the name of the file should meet the DCF standard). If you encounter this situation, play back the files on your computer.

Situation	Suggested remedies
The photo is blurry	• Make sure that the focus option you set is suitable for close-up shots. (p. 56) • Make sure that the lens is clean. If not, clean the lens. (p. 112) • Make sure that the subject is within range of the flash. (p. 123)
The colors in the photo do not match the actual scene	An incorrect White Balance can create unrealistic color. Select the proper White Balance option to suit the light source. (p. 66)
The photo is too bright	Your photo is overexposed. • Turn off the flash. (p. 53) • Adjust the ISO sensitivity. (p. 55) • Adjust the exposure value. (p. 64)
The photo is too dark	Your photo is underexposed. • Turn on the flash. (p. 53) • Adjust the ISO sensitivity. (p. 55) • Adjust the exposure value. (p. 64)

Situation	Suggested remedies
The TV does not display your photos	• Make sure that the camera is correctly connected to the TV with the A/V cable. • Make sure that your memory card contains photos.
Your computer does not recognize your camera	• Make sure that the USB cable is connected correctly. • Make sure that your camera is switched on. • Make sure that you are using a supported operating system.
Your computer disconnects the camera while transferring files	The file transmission may be interrupted by static electricity. Disconnect the USB cable and connect it again.
Your computer cannot play videos	Videos may not play on some video player programs. To play video files captured with your camera, install and use the Intelli-studio program on your computer. (p. 96)
Intelli-studio is not functioning properly	• End Intelli-studio and restart the program. • You cannot use Intelli-studio on Macintosh computers. • Make sure that **PC Software** is turned on in the settings menu. (p. 107) • Depending on your computer's specifications and environment, the program may not launch automatically. In this case, click **Start** → **My Computer** → **Intelli-studio** → **iStudio.exe** on your computer.

Camera specifications

Image sensor	
Type	1/2.3" (Approximately 7.76 mm) CCD
Effective pixels	Approximately 14.0 mega-pixels
Total pixels	Approximately 16.4 mega-pixels
Lens	
Focal length	Schneider-KREUZNACH f = 4.0-48.0 mm, f = 3.5 mm (35 mm film equivalent: 24 mm-288 mm, 21 mm)
F-stop range	• F2.9 (W)-F5.9 (T) (f = 4.0-48.0 mm) • F3.4 (W) (f = 3.5 mm)
Digital zoom	• Still image mode: 1.0X-5.0X (Optical zoom x Digital zoom: 60.0X) • Playback mode: 1.0X-13.5X
Display	
Type	TFT LCD
Feature	3.5" (8.9 cm) Wide 1152K Full Touch Screen Panel

Focusing			
Type	TTL auto focus (Multi AF, Center AF, Smart Face Recognition AF, Face Detection AF, Smart Touch AF, One Touch Shooting AF)		
Range		Wide (W)	Tele (T)
	Normal (AF)	80 cm-infinity	150 cm-infinity
	Macro	6 cm-80 cm	100 cm-200 cm
	Auto Macro	6 cm-infinity	100 cm-infinity

Shutter speed

- Easy Shot: 1/8-1/2,000 sec.
- P Mode: 1-1/2,000 sec.
- Night Shot: 8-1/2,000 sec.

Exposure	
Control	Program AE
Metering	Multi, Spot, Center-weighted, Face Detection
Compensation	±2EV (1/3 EV Step)
ISO equivalent	Auto, ISO 80, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600, ISO 3200 (up to 3M)

Flash	
Mode	Auto, Red-eye, Fill in, Slow Sync, Off, Red-eye Fix
Range	• Wide: 0.2 m-3.45 m (ISO Auto) • Tele: 1.0 m-1.7 m (ISO Auto)
Recharging time	Approximately 4 sec.

Shake reduction
OIS (Optical Image Stabilization)

Effect	
Photo Shooting mode	• Smart Filter (photo): Normal, Miniature, Vignetting, Soft Focus, Old Film 1, Old Film 2, Half Tone Dot, Sketch, Fish-eye, Defog, Classic, Retro, Negative, (Custom RGB) • Image Adjust: Sharpness, Contrast, Saturation
Video Shooting mode	• Palette Effect Recording: Palette Effect 1, Palette Effect 2, Palette Effect 3, Palette Effect 4 • Smart Filter (movie): Normal, Miniature, Vignetting, Half Tone Dot, Sketch, Fish-eye, Defog, Classic, Retro, Negative, (Custom RGB)

White Balance
Auto WB, Daylight, Cloudy, Fluorescent_H, Fluorescent_L, Tungsten, Custom Set

Date Imprinting
Date & Time, Date, Off

Shooting	
Photos	• Modes: Easy Shot (photo)*, Super Wide Shot, Close-up Shot, P Mode, Timer Shot, One touch shot, Smart Filter, Magic Frame shot, Object Highlight, Beauty Shot, Night Shot * Easy Shot: Macro, Macro text, Portrait, White, Landscape, Action, Tripod, Night, Night Portrait, Backlight, Backlight Portrait, Blue Sky, Sunset, Macro Color, Natural Green, Fireworks • Drive: Single, Continuous, Motion Capture, AEB • Timer: Off, 2 Sec, 10 Sec, Double

Videos	• Modes: Easy Shot (movie)*, HD Movie Recording, SD Movie Recording, Smart Filter (movie), Palette Effect Recording * Easy Shot*: Landscape, Blue Sky, Natural Green, Sunset, Action • Format: MP4 (H.264)(Maximum recording time: 20 min) • Size: 1280 X 720 HQ, 1280 X 720, 640 X 480, 320 X 240 • Frame rate: 30 FPS, 15 FPS • Voice: Sound Alive On, Sound Alive Off, Mute • OIS: On, Off • Video editing (embedded): Pause during recording, Still image capture, Time trimming
Playback	
Type	Single image, Thumbnails, Multi-slide show with music and effect, Movie clip, Smart Album*, Magazine View * Smart Album category: Type, Date, Face
Edit	Resize, Rotate, Image Adjust, Trim, Smart Filter
Effect	• Image Adjust: Face Retouch, Brightness, Saturation, Contrast, Red-eye Fix, ACB • Smart Filter: Normal, Miniature, Vignetting, Soft Focus, Old Film 1, Old Film 2, Half Tone Dot, Sketch, Fish-eye, Defog, Classic, Retro, Negative, Custom RGB

Voice recording

- Voice Recording (Maximum 10 hours)
- Voice Memo in a photo (Maximum 10 sec.)

Storage	
Media	• Internal memory: Approximately 10 MB • External memory (Optional): microSD card (up to 2 GB guaranteed), microSDHC card (up to 8 GB guaranteed) Internal memory capacity may not match these specifications.
File format	• DCF, EXIF 2.21, DPOF 1.1, PictBridge 1.0 • Still Image: JPEG (DCF) • Movie Clip: MP4 (Video: MPEG-4.AVC/H.264, Audio: AAC) • Audio file: WAV

Image size	For 1 GB microSD : Number of photos

		Super Fine	Fine	Normal
14m	4320 X 3240	122	240	353
12m	4320 X 2880	137	267	391
10m	4320 X 2432	163	320	471
10m	3648 X 2736	166	323	469
5m	2592 X 1944	319	607	858
3m	1984 X 1488	522	954	1,336
2m	1920 X 1080	742	1,336	1,878
1m	1024 X 768	1,582	2,505	3,006

These figures are measured under Samsung's standard conditions.Your results may vary depending on the shooting conditions and camera settings.

Interface	
Digital output connector	USB 2.0
Audio input/output	Internal speaker (Mono), Microphone (Mono)
Video output	• A/V: NTSC, PAL (selectable) • HDMI 1.4: NTSC, PAL (selectable)
DC power input connector	20 pin, 4.2 V

Power source	
Rechargeable battery	Lithium-ion battery (BP85A, 850 mAh)

The power source may differ depending on your region.

Dimensions (W X H X D)
100.9 X 59.35 X 22.4 mm (without protrusions)

Weight
174 g (without battery and memory card)

Operating Temperature
0-40 °C

Operating Humidity
5-85 %

Software
Intelli-studio

Specifications may change without notice to improve performance.

Glossary

ACB (Auto Contrast Balance)

This feature automatically improves the contrast of your images when the subject is backlit or when there is a high contrast between your subject and the background.

AEB (Auto Exposure Bracket)

This feature automatically captures several images at different exposures to help you capture a properly exposed image.

AF (Auto Focus)

A system that automatically focuses the camera lens on the subject. Your camera uses the contrast to focus automatically.

Aperture

The aperture controls the amount of light that reaches the camera's sensor.

Camera shake (Blur)

If the camera is moved while the shutter is open, the entire image may appear blurred. This occurs more often when the shutter speed is slow. Prevent camera shake by raising the sensitivity, using the flash, or using a faster shutter speed. Alternately, use a tripod, the DIS or OIS function to stabilize the camera.

Composition

Composition in photography means arranging objects in a photo. Usually, abiding by the rule of thirds leads to a good composition.

DCF (Design rule for Camera File system)

A specification to define a file format and file system for digital cameras created by the Japan Electronics and Information Technology Industries Association (JEITA).

Depth of field

The distance between the nearest and farthest points that can be acceptably focused in a photograph. Depth of field varies with lens aperture, focal length, and distance from the camera to the subject. Selecting a smaller aperture, for example, will increase the depth of field and blur the background of a composition.

Digital zoom

A feature that artificially increases the amount of zoom available with a zoom lens (Optical zoom). When you use the Digital zoom, the image quality will deteriorate as the magnification increases.

DPOF (Digital Print Order Format)

A format for writing printing information, such as selected images and number of prints, on a memory card. DPOF-compatible printers, sometimes available at photo shops, can read the information from the card for convenient printing.

EV (Exposure Value)

All the combinations of the camera's shutter speed and lens aperture that result in the same exposure.

EV Compensation

This feature allows you to quickly adjust the exposure value measured by the camera, in limited increments, to improve the exposure of your photos. Set the EV compensation to -1.0 EV to adjust the value one step darker and 1.0 EV to one step brighter.

Exif (Exchangeable Image File Format)

A specification to define an image file format for digital cameras created by the Japan Electronic Industries Development Association (JEIDA).

Exposure

The amount of light allowed to reach the camera's sensor. Exposure is controlled by a combination of the shutter speed, the aperture value, and ISO sensitivity.

Flash

A speed light that helps to create adequate exposure in low-light conditions.

Focal length

The distance from the middle of the lens to its focal point (in millimeters). Longer focal lengths result in narrower angles of view and the subject is magnified. Shorter focal lengths result in wider angles of view.

Histogram

A graphical representation of the brightness of an image. The horizontal axis represents the brightness and the vertical axis represents the number of pixels. High points at the left (too dark) and right (too bright) on the histogram indicate a photo that is improperly exposed.

H.264/MPEG-4

A high-compression video format established by international standard organizations ISO-IEC and ITU-T. This codec is capable of providing good video quality at low bit rates developed by the Joint Video Team (JVT).

Image sensor

The physical part of a digital camera that contains a photosite for each pixel in the image. Each photosite records the brightness of the light that strikes it during an exposure. Common sensor types are CCD (Charge-coupled Device) and CMOS (Complementary Metal Oxide Semiconductor).

ISO sensitivity

The sensitivity of the camera to light, based on the equivalent film speed used in a film camera. At higher ISO sensitivity settings, the camera uses a higher shutter speed, which can reduce blur caused by camera shake and low light. However, images with high sensitivity are more susceptible to noise.

JPEG (Joint Photographic Experts Group)

A lossy method of compression for digital images. JPEG images are compressed to reduce their overall file size with minimal deterioration of the image resolution.

LCD (Liquid Crystal Display)

A visual display commonly used in consumer electronics. This display needs a separate backlight, such as CCFL or LED, to reproduce colors.

Macro

This feature allows you to capture close-up photos of very small objects. When using the macro feature, the camera can maintain a sharp focus on small objects at a near life-size ratio (1:1).

Metering

The metering refers to the way in which the camera measures the quantity of light to set the exposure.

MJPEG (Motion JPEG)

A video format which is compressed as a JPEG image.

Noise

Misinterpreted pixels in a digital image that may appear as misplaced or random, bright pixels. Noise usually occurs when photos are shot with a high sensitivity or when a sensitivity is automatically set in a dark place.

Optical zoom

This is a general zoom which can enlarge images with a lens and does not degrade image quality.

Quality

An expression of the rate of compression used in a digital image. Higher quality images have a lower rate of compression, which usually results in a larger file size.

Resolution

The number of pixels present in a digital image. High resolution images contain more pixels and typically show more detail than low resolution images.

Shutter speed

Shutter speed refers to the amount of time it takes to open and close the shutter, and it is an important factor in the brightness of a photo, as it controls the amount of light which passes through the aperture before it reaches the image sensor. A fast shutter speed allows less time to let light in and the photo becomes darker and more easily freezes subjects in motion.

Vignetting

A reduction of an image's brightness or saturation at the periphery (outer edges) compared to the center of the image. Vignetting can draw interest to subjects positioned in the center of an image.

White balance (color balance)

An adjustment of the intensities of colors (typically the primary colors red, green, and blue), in an image. The goal of adjusting the white balance, or color balance, is to correctly render the colors in an image.

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  - Reorientate, or relocate, the receiving antenna.
  - Increase the distance between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio / TV technician for help.

- **CAUTION:**

  Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

- **Declaration of Conformity**

Trade Name	: Samsung Electronics America, Inc.
Model No.	: Samsung WB210
Responsible Party	: Samsung Electronics America, Inc.
Address	: 85 Challenger Road, Ridgefield Park, NJ 07660
Telephone No.	: 1-800-SAMSUNG (726-7864)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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